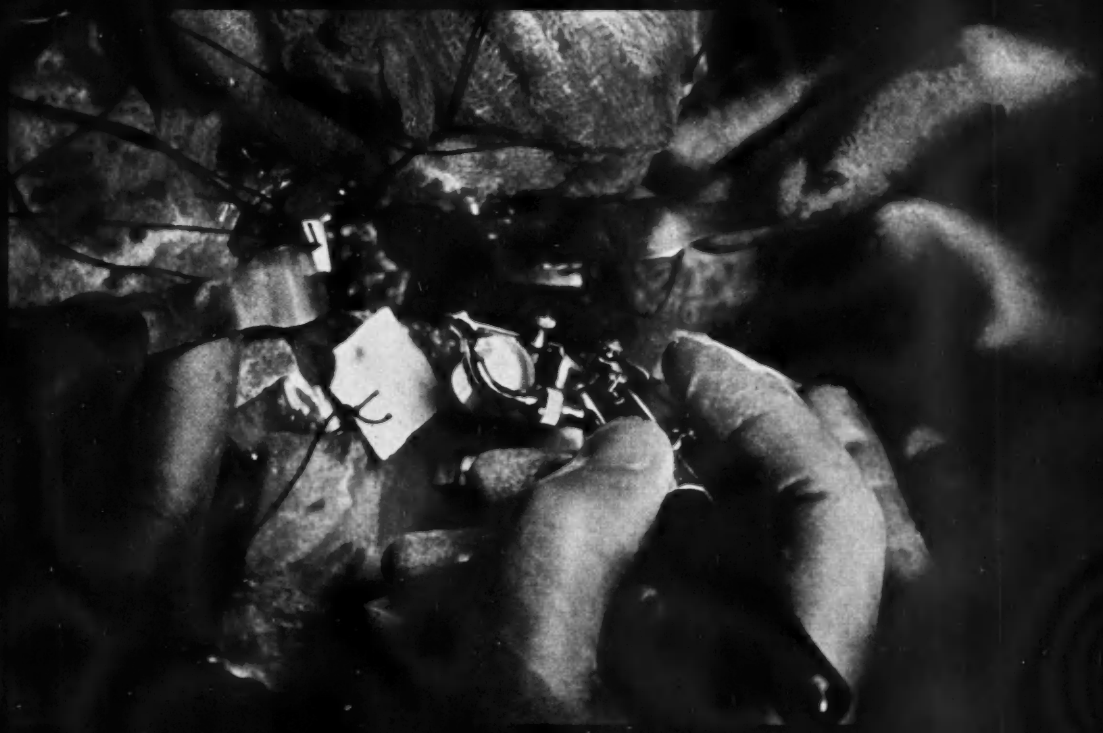
MEDICAL WORLD NEWS

NOVEMBER 10, 1961



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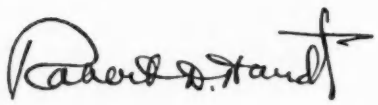

Robert A. Hardt, President

P.S.: Physicians who prefer generic names prescribe "Hydroxyphenamate, Armour."

LISTICA—Hydroxyphenamate, Armour. *Stedman's Medical Dictionary.

FOLD-OUT COVER

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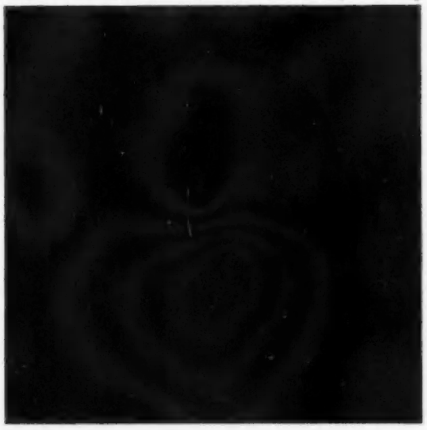
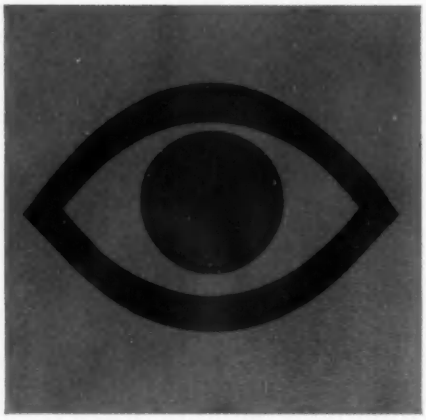
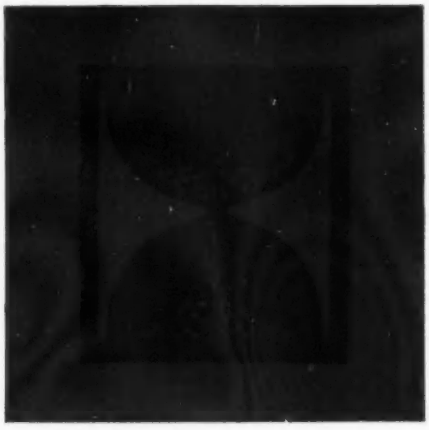
Symbols of the Age of Tension/Anxiety







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maintains acuity... promotes eunoia*...
facilitates somatic diagnosis and therapy

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New Listica allays tension/anxiety in as many as 89% of cases,[2-13] by selectively inhibiting impulses through internuncial pathways of the central nervous system. Whether the patient's tension/anxiety is psychosomatic or a complication of somatic disorder, Listica reduces or eliminates the excess impulsivity seen in tension/anxiety states.

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Unlike many drugs, Listica does not affect unconditioned response or normal motor activity. Thus, Listica allays tension and anxiety without inducing apathy or impairing acuity; patients are able to pursue normal activities, such as driving, reading, writing, etc., without interference from drug therapy.

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without reported toxicity or contraindications

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without serious side effects or habituation

During three and one-half years of clinical study in 1,759 patients,[2-13] Listica has produced no serious side effects. Less than 4% of patients experienced any side effects, and these were invariably minor and transient. Most frequent (38 cases) was mild drowsiness, which disappeared after the first few days of Listica therapy. Habituation, cumulative effects, or withdrawal symptoms have not been noted, even in patients taking Listica as long as two years.

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References:

[1]Bastian, J. W.: Classification of CNS Drugs by a Mouse Screening Battery. To be published in Intern. Arch. de Pharmacodynamie; [2]Hubata, J. A., and Hecht, R. A.: Review of Clinical Use of Hydroxyphenamate (Listica) in 1,759 Patients. To be published in Clinical Medicine; [3]Taub, S. J.: Management of Anxiety in Allergic Disorders—New Approach. To be published in Psychosomatics; [4]Cahn, B.: Experience with a New Tranquilizing Agent (Hydroxyphenamate). *Ibid;* [5]Davis, O. F.: On Use of Hydroxyphenamate in Anxiety Associated with Somatic Disease. To be published; [6]Alexander, L.: Effect of Hydroxyphenamate on Conditional Psychogalvanic Reflex in Man. Supplement to Diseases of the Nervous System, Sept., 1961; [7]Cahn, B.: Effect of Hydroxyphenamate in Treatment of Mild and Moderate Anxiety States. *Ibid;* [8]Cahn, M. M., and Levy, E. J.: Use of Hydroxyphenamate (Listica) in Dermatological Therapy. *Ibid;* [9]Eisenberg, B. C.: Amelioration of Allergic Symptoms with a New Tranquilizer Drug (Listica). *Ibid;* [10]Friedman, A. P.: Pharmacological Approach to Treatment of Headache. *Ibid;* [11]Greenspan, E. B.: Use of Hydroxyphenamate in Some Forms of Cardiovascular Disease. *Ibid;* [12]Gouldman, C., Lunde, F., and Davis, J.: Clinical Trial of Hydroxyphenamate in Alcoholic Patients. *Ibid;* [13]McLaughlin, B. E., Harris, J., and Ryan, E.: Double Blind Study Involving "Listica," Chlordiazepoxide, and "Placebo" as Adjunct to Supportive Psychotherapy in Psychiatric Clinic. *Ibid;* [14]Bastian, J. W.: Pharmacology and Toxicology of Hydroxyphenamate. *Ibid;* [15]Bossinger, C. D.: Chemistry of Hydroxyphenamate. *Ibid.*

ARMOUR PHARMACEUTICAL COMPANY, KANKAKEE, ILLINOIS

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*Stedman's Medical Dictionary

NOVEMBER 10, 1961 VOL. 2, NO. 23

MEDICAL WORLD NEWS

THE NEWSMAGAZINE OF MEDICINE

On the cover: Intracranial aneurysms are prevented from rerupturing by new method of reinforcing with adherent plastic sprayed on through an artist's air brush. Story on p. 34.

Departments

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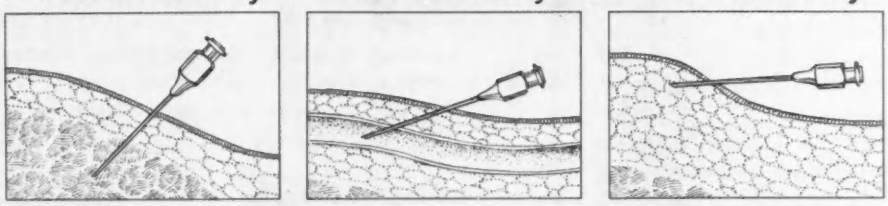

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*Council on Drugs: New and Nonofficial Drugs, Philadelphia, J. B. Lippincott Co., 1960, p. 732

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LATE NEWS

HYPOTHERMIA PLUS HYPERTHERMIA ENHANCES TUMOR CHEMOTHERAPY

A new approach to cancer chemotherapy, combining perfusion, hypothermia and hyperthermia, is under investigation by Los Angeles and North Carolina clinicians.

Dr. Donald B. Rochlin, of the University of California, reports that the technique produced disappearance or marked regression of head and neck tumors in 22 out of 32 patients. Three have shown no recurrence over a two-year period.

The Los Angeles group perfuses with a mixture of phenylalanine and actinomycin D. "The two drugs are no magic combination," says Dr. Rochlin, "but we felt that two agents might yield better results than one." The patients are given total body hypothermia at 88° F, which diminishes collateral blood circulation into the perfused area and thereby retards "leakage" of the drugs into the general circulation. At the same time, local hyperthermia, produced by heating the perfused blood extracorporeally to 100° F, speeds uptake of the chemicals.

Dr. William W. Shingleton, of Durham, N. C., has employed a similar technique to treat 28 patients with carcinomas of the abdominal viscera, including the cervix, uterus, ovaries, pancreas and liver. Ten still survive, and in two, metastatic liver tumors appear to have been destroyed.

The Durham clinician, who uses nitrogen mustard as his chemotherapeutic agent, declares that though "we haven't achieved much in the way of survival in these advanced cancer patients, we have helped greatly in the relief of pain." He adds that nitrogen mustard, perfused under general hypothermia and local hyperthermia, does not appear to depress bone marrow.

HAWAIIAN STUDY POINTS UP NEW PUZZLES IN CANCER INCIDENCE

Epidemiologists who have been ruminating over ethnic differences in cancer incidence (MWN, Sept. 29) have a fresh statistical morsel to chew on. A Hawaii health department official reports marked variations in tumor occurrence among Caucasian, Japanese, Hawaiian, Filipino and Chinese groups — the principal ingredients in the new state's ethnic stew-pot.

Dr. Walter B. Quisenberry points out that stomach tumors are most prevalent among the Japanese, particularly Japanese men. He ascribes the high incidence to diet, heat of food when eaten, alcohol intake and "psychosomatic factors," which "may cause benign ulcers that later become malignant." Filipino men, in contrast, show a high incidence of liver cancer — perhaps also due to diet, says the Hawaii investigator.

Hawaiian women have a high rate of cancer of the uterine cervix, due to a higher birth rate than other ethnic groups and "a casual temperament which causes them to ignore medical advice on post-partum care."

The white race fares particularly badly. Caucasian women were high in breast cancer ("nursing habits") and colon cancer ("dietary and bowel habits"); Caucasian men topped the list in lung cancer ("smoking habits") and prostate cancer ("mating habits"). Both were high in skin cancer ("light pigmentation").

Most curious ethnic susceptibility was the high incidence of nasopharyngeal cancer in Chinese men and women, which Dr. Quisenberry ascribes to inhalation of the smoke from burning incense.

DAILY SPOONFUL OF SALTS GIVEN TO PREVENT KIDNEY CALCULI

A simple dose of salts can stop patients from forming kidney stones, says a Johns Hopkins professor.

Dr. John Eager Howard has told an international symposium on bone in San Francisco that the urine of stone-formers is identifiably different from that of normal persons. Normal urine—which he calls "good"—decalcifies rat cartilage; the "evil" urine of stone-formers will cause the cartilage to calcify further.

The investigator rehabilitates "evil" urine to "good" by administering a simple mixture of disodium phosphate

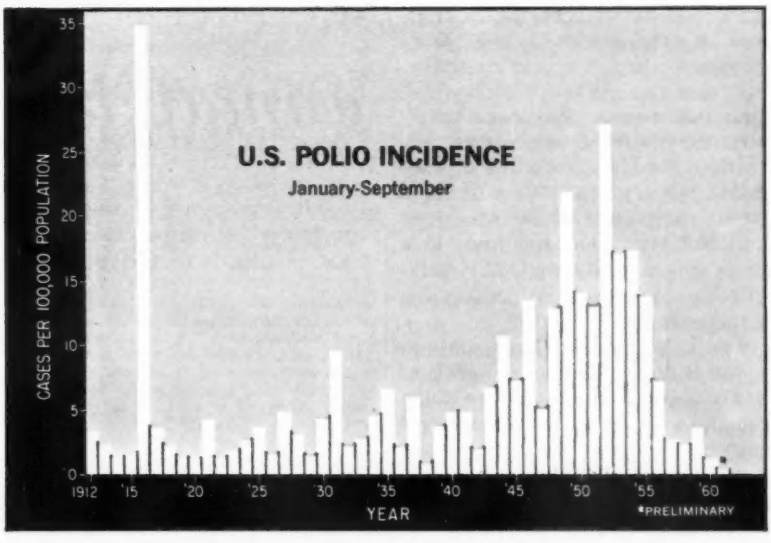
CONTINUED ON PAGE 6

POLIO GRAPH REACHES LOWEST POINT ON RECORD

As the 1961 polio season draws to a close, incidence of the disease appears to have hit an all-time U.S. low.

The Public Health Service reports that this year's January-September incidence is well under one case per 100,000 population—the lowest since 1912, when national figures first became available.

According to Dr. D. A. Henderson, chief of the Surveillance Section of the PHS Communicable Disease Center, Atlanta, "vaccination has played a major role" in the drop. As examples, he cites figures from two recent outbreaks. Of 19 cases in Newberry County, S. C., 15 were unvaccinated; of eight cases in an area along the Vermont-New Hampshire border, five had received no shots.



and sodium acid phosphate—a teaspoonful or so a day. Stone formation ceases, he says. One patient, who had formed 400 stones in five years, stopped altogether when put on this regimen.

'RHEUMATOID' FACTOR FOUND MISSING IN RHEUMATICS' SERUM

Agammaglobulinemic children with rheumatoid arthritis do not have the rheumatoid factor in their serum. From this finding, Dr. Robert Good, professor of pediatrics at the University of Minnesota, concludes that rheumatoid arthritis may be caused by infection after all.

"To indict the rheumatoid factor in the etiology of rheumatoid arthritis may turn out to be as mistaken as it would have been to call the Wasserman reaction a cause of syphilis. Yet this might well have happened if the Wasserman reaction had been discovered before the spirochete," Dr. Good says.

Discussing his work on agammaglobulinemia at a symposium on immunology sponsored by the Kaiser Foundation in San Francisco, Dr. Good suggests that agammaglobulinemia arises from a basic genetic defect which may be expressed hematologically in a variety of ways.

This theory, he says, is supported by numerous familial studies which have shown that agammaglobulinemia, idiopathic thrombocytic purpura, rheumatoid arthritis, systemic lupus erythematosus and some other collagen diseases all occur in the relatives of patients with agammaglobulinemia.

SURGEONS SHOWN 'WAY OFF' IN ESTIMATES OF BLOOD LOSS

How good are surgeons at estimating, visually, the amount of blood lost by the patient during an operation? Not very good, according to a survey conducted by two USAF medical officers at a national convocation of surgeons.

Capts. Warner H. Gustavson and Nelson B. Rue, surgeons at Lackland Air Force Base, Tex., asked the visiting specialists to step up and guess how much blood was in each of four kinds of surgical sponges. Each sponge was dyed to represent saturation with a specific amount of blood.

Of the nearly 1,500 surgeons who guessed, the majority were wrong. "They were way off," says Capt. Rue. "Almost all were on the high side. We think this is the reaction to a lot of material that's appeared in surgical literature saying that surgeons' blood loss estimates were too low. Now the pendulum is swinging, and surgeons are estimating too high. Such a situation makes for unnecessary transfusions."

Their survey, said Capts. Gustavson and Rue, indicates that surgeons shouldn't guess blood loss by looking, but should use more accurate means, such as sponge weighing or colorimetric machine estimation.

MUCUS SECRETION MAY EXPLAIN SEASONAL POLIO INCIDENCE

A National Institutes of Health virologist has discovered another link between atmospheric moisture and the summer polio peak.

Last year, Dutch investigators found that low humidity—such as that found indoors in winter — shortens the life of the poliovirus (MWN, Dec. 16). Now, Dr. Charles Armstrong, former chief of the NIH Laboratory of Infectious Diseases, suggests that decreased humidity may also lower polio incidence by stimulating mucus secretion in the throat and upper respiratory tract.

Writing in the *American Journal of Public Health*, Dr. Armstrong points out that several viruses have been proved less infective—by injection—when mixed with mucin. His most recent tests indicate that the same is true of virus absorption through the gastrointestinal system.

Mice infected with encephalomyocarditis virus by stomach tube, he reports, show lower mortality if the inoculum is suspended in mucin solution. Moreover, the mucin suspension also produces lower levels of immunity, as shown by subsequent challenge with the virus. Studies using human throat mucus yield similar results, the NIH specialist notes.

Dr. Armstrong concludes from these findings that mucus-embedded virus finds difficulty in reaching host cells. Mucus from the mouth and throat, he believes, "tends to hinder but does not prevent, absorption of virus from the gastorintestinal tract."

A larger dose, or a more virulent virus can override the protective effect of mucin. But "it appears that in human polio the usual dose of naturally acquired virus would fall within the range of mucus influence, since it is estimated that there are 100 subclinical cases for each clearly recognizable case."

RADAR WAVES APPEAR TO MAKE RED CELLS LESS FRAGILE

A French physician has discovered a hitherto unobserved effect of electromagnetic radiation among radar station personnel: a great increase in erythrocyte resistance to hemolysis.

The observation was made during an exhaustive physiological investigation of 67 men working at radar bases, reports Dr. Luis Miro of the French Air Force. Though most of the subjects had normal hemoglobin and hematocrit levels, he says, 97 per cent showed increased red-cell resistance, as against seven per cent among controls working in other Air Force installations nearby. More than half had "an exceptional rise" in resistance.

Dr. Miro believes that his finding is not related to the thermal effects of radiation, since there appears to be no correlation between the heat output of the radar apparatus and the magnitude of the effect. He thinks that the rise in resistance stems from the radar waves themselves, and that it probably depends on their frequency.

TRAFFIC VICTIMS REQUIRE SPECIALISTS IN TRAUMA

A new surgical specialty — traumatology — is needed to handle the rising flood of auto crash casualties, says a New York specialist.

Pointing to the million-and-a-half annual deaths and injuries in U. S. traffic accidents, Dr. Preston Wade of Cornell Medical College declares that under today's "fragmentation" of surgery the multiple injury patient might need treatment by ten different specialists in his first few hours of hospitalization. Such a "gaggle of experts," he says, is confusing and unrealistic. What is needed is an up-to-date, more skilled version of the old general surgeon who can handle all phases of trauma, and — as "captain" of the surgical team — take charge of the whole patient.

Dr. Wade feels that today's orthopedic and general surgeons are best equipped to become tomorrow's traumatologists. But he foresees "bitter opposition" to the new specialty from existing specialist groups, based on "professional jealousy and fear of financial loss."

As a further recommendation, the Cornell researcher urges specialized accident hospitals. Such institutions,

CONTINUED ON PAGE 8

LATE NEWS CONTINUED

he says, operate successfully in other countries. In Austria and Hungary, for instance, "experienced men with adequate equipment" treat every kind of trauma — "remove a ruptured spleen, operate upon a middle meningeal hemorrhage, debride and reduce an open fracture, repair a stove-in chest — and still have access to consultation by other specialists."

NEGATIVELY CHARGED SUTURE WIRES PREVENT THROMBOSIS

Thrombosis, a major limitation in surgery of small blood vessels, may be averted with the use of platinum wire sutures carrying small electrical charges, said Dr. Seymour I. Schwartz of the University of Rochester Medical Center.

Blood vessels normally carry negative electrical charges that repel the negatively charged platelets, but when the vessels are damaged, their charge becomes positive; they attract the cells and hasten thrombus formation.

In experiments with dogs, Drs. Schwartz and John W. Richardson inserted 5 cm non-siliconized stainless steel tubes into the ends of transected jugular veins or femoral arteries, then applied 0.3 to 0.4 milliamperes of negative current. Seven of 12 arterial tubes and one of four venous tubes were patent after an hour, and five of the arterial conduits remained patent for four to 14 hours, but tubes in all the controls were totally occluded.

SOVIET MD SEES CONTROLLED CLIMATE AS PROMISING THERAPY

Soviet scientists are trying "climate conditioning" as a means of relieving and perhaps curing hypertension.

According to Dr. D. I. Panchenko, patients are installed in a "biotron"— a chamber in which temperature, humidity, bacterial count, and even ionization are rigidly controlled to produce "ideal" weather.

Thus protected from the vagaries of climate, the patient can better deal with his disease himself, says the Soviet investigator. The biotron activates "defensive forces and reserves of the human organism without the use of any chemotherapeutic agents."

Dr. Panchenko, writing in the Soviet periodical *Science and Life*, reports that the technique worked well in a trial involving 500 patients, most of them hypertensives. All showed "considerable improvement" and a few were said to have recovered fully. Patients with bronchial asthma and endarteritis also improved, he says.

Dr. Panchenko explains that he developed the "biotron" after studying the influence of environment on the human organism. He became convinced that "it is essential to provide a special accommodation" for certain types of patients.

One reason he cites for the biotron's effectiveness is the fact that it allows the physician to create a more favorable electromagnetic field in the patient's environment.

GLASS FIBERS USED AS FILTERS IN SURGICAL MASKS

A glass fiber surgical mask which filters out close to 100 per cent of aerosol-borne bacteria and viruses has been developed by University of Utah College of Medicine microbiologist, Dr. Paul S. Nicholes. The masks are made of mats of glass fibers 3 to 4 mm thick, with layers of cotton gauze on each side. They are twice as efficient as cotton-gauze or flannel-gauze masks in filtering out *Staphylococcus aureus* and *E. coli* T-1 bacteriophages. The new masks will be made by the C. R. Bard Co., Murray Hill, N. J.

NEW SPERM PRESERVATIVE MAY AID INFERTILE HUSBANDS

A new technique of sperm-banking may enable men with low sperm counts to father children.

The method, reported by zoologist Erwin Goldberg, of North Dakota State University, utilizes a simple, chemically-defined storage solution to keep washed human and other mammalian sperm alive up to six days at

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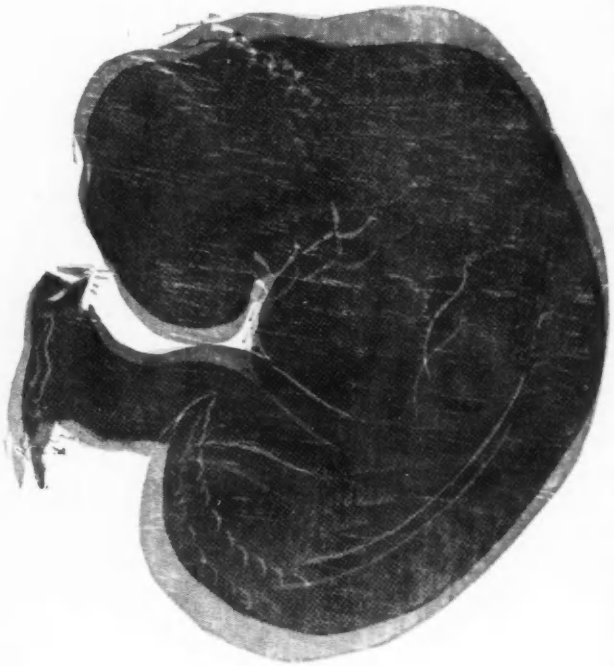

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Finnerty, F.A., Jr.: In *Edema Mechanisms and Management: A Hahnemann Symposium on Salt and Water Retention.* Edited by J.H. Moyer and M. Fuchs. 833 pp. Philadelphia: Saunders, 1960, pp. 469-470.

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room temperature. Present techniques require deep-freeze temperatures.

Animal breeding studies with the new medium have confirmed its effectiveness, says Dr. Goldberg. Of 286 cows inseminated with sperm stored in the solution, 83 per cent produced calves; in a control group receiving frozen sperm, the conception rate was 91 per cent.

Theoretically, says the North Dakota investigator, the technique could enable a man of low fertility to build up his own sperm bank over a six-day period, following which his wife could be inseminated with the accumulated deposits.

Dr. Goldberg adds that the new medium may facilitate research into sperm metabolism. Frozen samples, he points out, are difficult to study since they incorporate "poorly defined, albeit nutritious," organic substances. The improved solution, by contrast, consists primarily of inorganic salts, with some glucose and antimicrobial agents added.

The ability of sperm to survive in this low-energy environment, he notes, appears to contradict the belief that they have a high metabolic rate.

CELIACS REQUIRE SPECIAL DIET UNTIL MATURITY

Children who have recovered from celiac disease should not be allowed to resume a normal diet, warns Dr. J. W. Gerrard of the University of Saskatchewan. The Canadian professor advises that only gluten-free foods be taken until "the child has reached adult life and is mature in all respects."

The reason, he says, is that the growth curves of so-called recovered celiacs on ordinary diet show "quite clearly" that they do not develop at an optimum rate. Some of these children at a later age suffer severe anemia, gross malnutrition, edema and tetany, the pediatrician reports, yet "the diagnosis of adult celiac disease or idiopathic steatorrhea may not be made until they have been ill for many years."

The researcher points out that at least six other disorders may mimic celiac disease: fibrocytic disease of the pancreas, giardiasis, milk allergy, protein-losing gastroenteropathy, ganglioneuromas and a rare condition, a-beta-lipoproteinemia.

Confirmation of suspected celiac disease, he says, is best obtained by biopsy of the jejunal mucosa, using a suction biopsy tube. In children with the disease, the mucosa are pale and flat under the dissecting microscope, in contrast with their normal pink and filamentous appearance.

With treatment, Dr. Gerrard reports, the jejunal lining tends to normalize. He insists, however, that "to insure optimum health both in childhood and in adult life, it is important that wheat-containing products should be excluded rigorously from the diet."

ARTERIOATRIAL SHUNT STEPS UP COLLATERAL BLOOD FLOW

A new surgical procedure for coronary disease, based on the premise that desaturated blood induces vasodilation, apparently has proved successful in seven patients with histories of heart attacks.

Developed by a University of Minnesota team, the operation involves anastomosis between the pulmonary artery and the tip of the left atrial appendage, says Dr. Aydin M. Bilgutay. The resulting shunt permits small amounts of deoxygenated blood to

flow into the left atrium, resulting in only 80 per cent saturation in blood flowing into the aorta.

Employed on dogs with experimental progressive coronary occlusion, the shunt produced increased collateral circulation and no infarct patterns on the EKG, says Dr. Bilgutay. The first clinical trial involved seven patients, all of whom experienced constant pain despite vasodilator drugs or nitroglycerine; some could take only a few steps each day. Postoperatively, says the Minnesota surgeon, none has reported pain, all have shown improvement.

Epidemiological studies, Dr. Bilgutay points out, have shown that blood at 80 per cent saturation has no adverse effects on the body. Natives of the Andes, he notes, live all their lives on 86 per cent saturated blood. None of the patients has shown any bad results from the decreased oxygen tension.

Dr. Bilgutay regards the shunt as superior to other surgical procedures employed in coronary disease — such as endartectomy and revascularization — in increasing collateral blood flow.

SUPREME COURT STANDS PAT ON CONTRACEPTIVE DECISION

The Supreme Court, which seldom changes its mind after deciding a case, has followed its usual pattern in dealing with Connecticut's anti-contraceptive law.

At its first business session of the 1961-62 term, the Court denied without comment a petition, by Connecticut attorney Fowler V. Harper, asking the Court to reconsider its June decision dismissing the case.

The Court's original opinion, written by Justice Felix Frankfurter, had referred to "the unreality of the lawsuits" (MWN, July 7). Frankfurter maintained there was no indication that the state would prosecute anyone for violating the law banning use of contraceptives, and pointed out that they are commonly sold in drug stores throughout the state.

Attorney Harper's petition called this decision "an open invitation to appellants to violate the criminal law of the state because it is unlikely that they will be caught." The inference that because criminal legislation has not been invoked for a number of years, it will not be enforced in the future "is an illusory one," Harper continued. "Can it be that the assumed whim of past prosecutors, and conjectures as to the whim of future state officials, can determine rights of citizens to have their constitutional liberties determined without the risk of going to prison?"

In answer, the nine justices stood — or sat — mute.

USE OF DRUGS IN COSMETICS OPPOSED BY AMA COMMITTEE

The practice of adding drugs to cosmetics is under attack by the American Medical Association.

Dr. Stephan Rothman, chairman of the AMA Committee on Cosmetics, says that adding pharmacologically active compounds to cosmetic preparations sold across the counter is "ill-advised" and perhaps dangerous.

Dr. Rothman points out that "no drug has been shown to have *no* percutaneous absorption at all — though admittedly some have very little." In the case of cosmetics applied once or several times daily, often on relatively large surfaces, "the amount absorbed and permitted to have systemic effects is entirely uncontrolled."

CONTINUED ON PAGE 13

LATE NEWS CONTINUED

Furthermore, Dr. Rothman says, with the exception of antibiotics added to deodorants, "nobody has ever proved that any kind of drug such as vitamins, hormones, or antibiotics, when incorporated into cosmetics, improves the appearance of nondiseased skin."

Dr. Rothman raises his "most serious objection" to the cosmetic use of antibiotics, such as bacitracin, polymyxin B, neomycin sulfate and tyrothricin — all toxic when taken internally. "Before they can be legitimately used in cosmetics, it should be shown that their unrestricted use daily and over relatively large surfaces will not produce toxic effects," he urges. Moreover, the development of bacteria resistant to antibiotics used indiscriminately in cosmetics would pose a "threat to public health."

Finally, he points out, continual and indiscriminate application of antibiotics upsets the delicate equilibrium of harmless and harmful bacteria normally present on the skin, which inhibit the growth of harmful fungi and bacteria.

As to the use of antibiotics in deodorants, Dr. Rothman concedes that, by killing bacteria, they have a "powerful deodorizing effect."

However, the risks involved are "far too serious" for the sake of mere deodorization. There is "a possibility of sensitization reactions with the chance of making it impossible to use a life-saving drug later on."

EARLIER MARRIAGES LOWER INCIDENCE OF TWINNING

Fewer twins in the U.S. are predicted by two population investigators. Amram Scheinfeld of Columbia University, and Joseph Schechter of the U.S. Office of Vital Statistics, find that changing socio-economic patterns are leading women to marry younger and have their families at an earlier age. The result: a significant drop in multiple births.

The same trend, they note, is producing a higher proportion of identical to fraternal twins. Studies of multiple births show that a woman's chances of having dizygotic twins increase year by year up to the age of 40. Monozygosity, however, seems little affected by age. Since most women now complete their families before their middle thirties, say the researchers, those twins born have a better chance of being identical.

The two investigators back up their trend-spotting with figures. Between 1935 and 1937, the rate of twinning was 11 births per thousand white mothers; in 1956-58, only ten per thousand. Moreover, while identical twins make up less than 31 per cent of the twin population born before 1920, 37 per cent of the 1958 twin births were monozygotic.

Data from several European countries show the same trend, say Scheinfeld and Schechter. Ireland, where people are still notoriously late to marry, remains the outstanding exception. Its twinning rate—15 pairs per thousand births — is the highest in Europe.

The drop in twins, say the researchers, should be paralleled by an even sharper drop in higher multiple births. A woman is about four times as likely to have twins at 35 as at 20, but in the same period her chances of having triplets have shot up sixfold, while the odds in favor of quadruplets have increased 20 times, they note.

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	Diaphragm and Jelly	Condom	Jelly and Syringe	EMKO Foam
Paniagua, Vaillant and Gamble, 1961(1)	—	—	—	29
Belaval, Gould and Gamble, 1938(2)	30	—	28	—
Beebe and Belaval, 1942(3)	29	—	40	—
Tietze and others, 1961(4)	34	28	36	—
Wayne B. Cox, 1961(5)	—	—	—	3

(1) Paniagua, M. E.; Vaillant, A. B.; and Gamble, C. J.: Field Trial of a Contraceptive Foam in Puerto Rico, *Journal of the American Medical Association*, 177:125-129 (July 15) 1961

(2) Belaval, J.; Gould, C.; and Gamble, C.J.: Effectiveness of Contraceptive Advice Among Underprivileged of Puerto Rico, *J Contraception*, 3:224-227 (December) 1938

(3) Beebe, G. W., and Belaval, J. S.: Fertility and Contraception in Puerto Rico, *Puerto Rico J Public Health Trop Med* 18:3-52 (September) 1942

(4) Tietze, C., and others: Family Planning Service in Rural Puerto Rico, *Amer J Obstet Gynec* 81:174-182 (January) 1961

(5) Cox, W. B. (*Personal Communications*) (June 9) 1961

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Letters to the Editor

X-Ray Registrations

I note with considerable interest your article on "Ohio County Initiates X-Ray Inspection Plan" (MWN, Oct. 13).

Your survey of states requiring registration of radiation sources appeared quite authoritative. I'd like to add that Wisconsin, at the present time, has such a plan under study.

ROBERT S. HAUKOHL, M.D.
Milwaukee, Wisc.

[*Dr. Haukohl, and all our Wisconsin readers, will be interested to know that the state has passed its proposed registration act. Under the new law, radiation installations will be registered by Jan. 1, 1962. Sources licensed by the Atomic Energy Commission, or found not hazardous by the Industrial Commission, will be exempt. Registration fees will range from $1 to $5.*—ED.]

Too Far

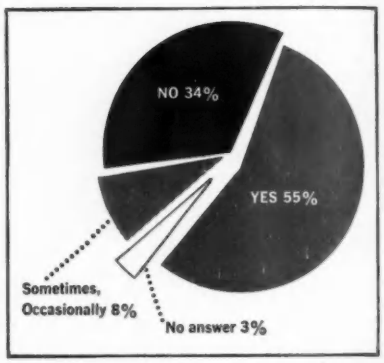
I think automation is being carried too far when I see an item stating that computers will evaluate Rorschach tests (MWN, Oct. 13, *Doctor's Business*).

The relationship between psychiatrist and patient, or, indeed, between human beings, is far too precious to be lightly given over to an uncomprehending machine. The absurdity of drawing "rigidly logical conclusions" about the delicate, elusive human personality, should obviously preclude all attempts at mechanization.

JEROME RODNEY, PH.D.
Syracuse, N. Y.

Sterility Cure

I would like to call the attention of Dr. Weigel, who said he had never heard of a physician or adoption agency that believed adoption was a "cure" for sterility. (MWN, Oct. 13, *Letters to the Editor*) to an item which appeared in the October issue of *Patterns of Disease*. The question was asked: "Is it your impression that seemingly infertile couples who adopt children subsequently have children of their own?"



Fifty-five percent of the physicians queried answered "Yes."

So, it seems, even "informed" physicians do give credence to this "old wives' tale."

SAMUEL F. MOORE, M.D.
Pittsburgh, Pa.

Philologic Lesions

Your article "Experts Ask 'What's in a (Drug) Name?" (MWN, Oct. 13) suggests that you might be interested in knowing of our organization, which, to put it lightly, is concerned with what's in a word.

J. E. SCHMIDT, M.D.
Chairman
National Association on
Standard Medical Vocabulary
Charlestown, Ind.

[*Dr. Schmidt's organization is engaged in enlisting medical educators to aid in eliminating some serious medical vocabulary "disorders." The Association's information booklet lists: polysemia, excessive synonymy, inconsistent spelling, antithesis and polyepy. Dr. Schmidt, or Dr. Erwin Di Cyan (PhD), Director,*

12 E. 41 St., New York 17, N. Y., will be glad to hear from MDs interested in helping track down the "sources of vocabulary morbidity."—ED.]

Below-Knee Prosthesis

You recently did an article called "Socket Limb Eases Walking" (MWN, Sept. 29). Could you tell me if these limbs are now available, or where I could get literature on them?

H. L. WILLIAMS
Beloit, Wisc.

[*Reports of this new type of prosthesis were presented by two teams of researchers to the American Congress of Physical Medicine and Rehabilitation. One group was headed by Dr. Lester Wolcott, University of Michigan Medical Center, Ann Arbor, the other by Dr. Lewis A. Leavitt, Baylor University College of Medicine, Houston, Texas.*—ED.]

Sulfhydryl Inhibitors

In the article about our cancer work (MWN, Sept. 29, "New Agents Heighten Therapeutic Effect of X-Rays") you did a fine job of getting the main points condensed into a short abstract.

Incidentally, the picture was turned upside down, but was identified correctly and probably looks better your way than mine.

FRANCES E. KNOCK, M.D.
Chicago, Ill.

Golden Fleece

In your story "The Art of Growing Teeth Under Glass" (MWN, Oct. 13) you start off by saying that Cadmus sowed the dragon's teeth and reaped a crop of conflict. I always had the impression that it was Jason who grew more than he bargained for. Am I right?

H. WM. DAVIDOW, M.D.
Los Angeles, Calif.

Both Cadmus and Jason sowed the dragon's teeth; but Jason used the ones Cadmus left over — so your editors get the golden fleece.

ROBERT GERSTNER, M.D.
New York N. Y.

Dangerous First Aid

You mentioned in your last issue (MWN, *Oct.* 13, *Outlook*) that the Public Health Service plans to give first aid courses to 60 million Americans! The curriculum is to include "treatment of fractures and common infectious or epidemic diseases . . . and delivery of babies."

Even a GP with many years' practice and experience, feels nervous at times at the possible outcome of treatment. Can anyone imagine the havoc that could be created if "a member of a family" was confronted with a serious illness in a loved one and tried to treat-it-himself?

WILLIAM R. BURNS, M.D.
Chicago, Ill.

Natural Causes

In your last issue you ran a short item on the death of Napoleon (MWN, Oct. 13, *Scissors & Scalpel*) in which it was suggested he may have been poisoned.

I read in the paper today that the widow of the great-grandson of Marshal Charles Tristan de Montholon, who presumably "did the deed," said that since Napoleon had displayed complete confidence in the Marshal it was obvious that "such allegations can only be contemptible."

And Dr. Paul Gantere, quoted as an authority on the Emperor's last days, said Napoleon had probably died of a stomach illness, attributable to an ulcer or cancer.

ERWIN SHAPIRO, M.D.
New York, N. Y.

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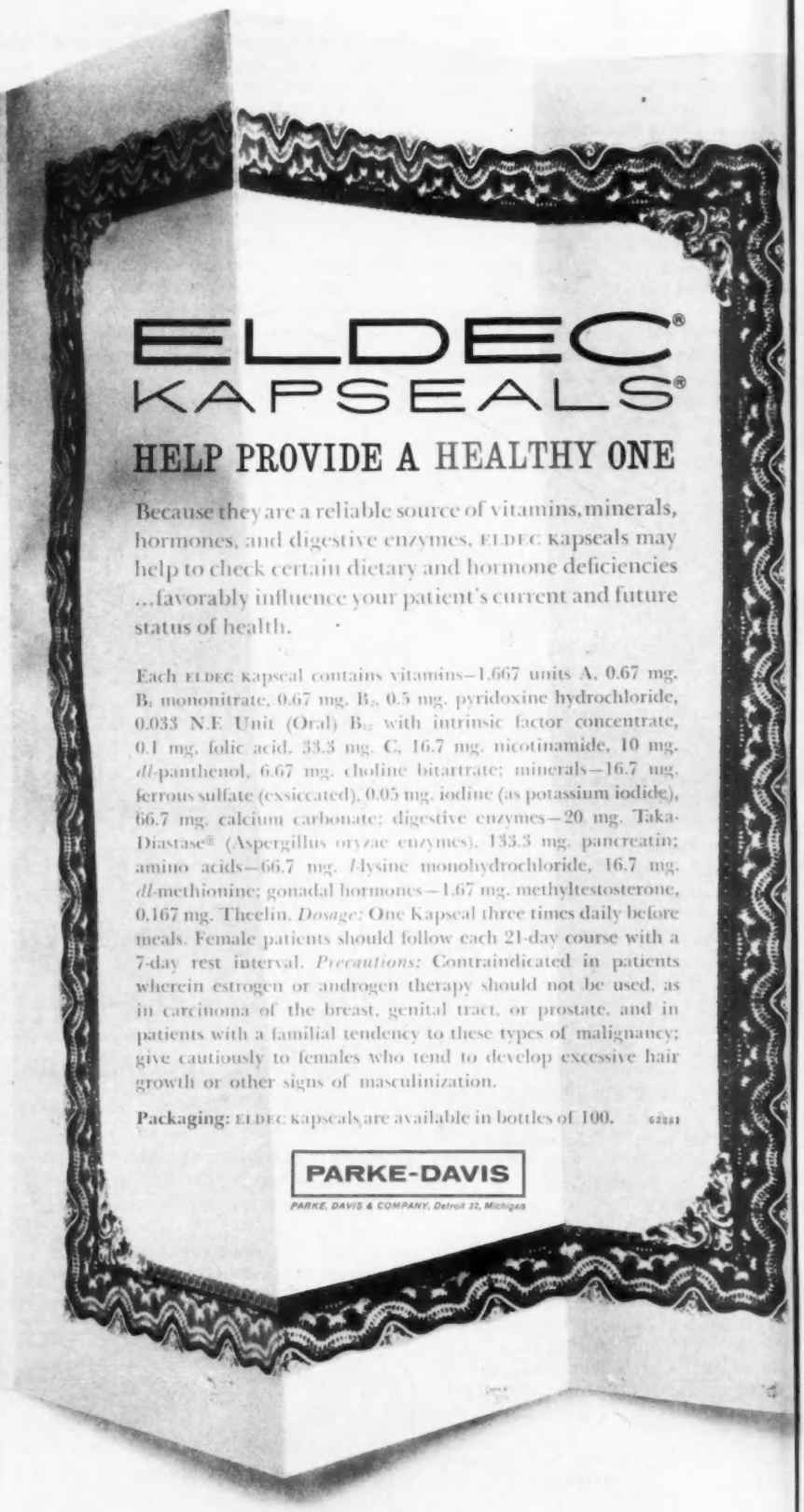

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A LETTER FROM THE PUBLISHER

As you can well imagine, in the course of a week we receive many letters—some flattering, some analytical, some critical. Most of them are quite brief, but one came in the other day which runs to almost 1,000 words. It offers such stimulating comment on the very heart of our publishing policy that I am taking the liberty of sharing some of its observations with all our readers.

The letter from a GP in Stockwell, Ind., Dr. F. J. Babb, comments incisively on our interview with Professor Ray Brown, former AHA president (MWN, Sept. 29). The cover story of that issue was devoted to the "hospital of the future." In conjunction with that story, we asked Professor Brown, an outspoken authority in this field, for his views. We printed what Professor Brown said—whether we agreed with it or not — because we thought that physicians should know what a leader in the hospital field was thinking and saying.

In the light of this background, two of Dr. Babb's comments are especially interesting, and I would like to pass them on to you. Unlike Professor Brown, Dr. Babb believes that further expansion of medical prepayment plans would have serious shortcomings. He writes:

> *Medical prepayment certainly has its advantages. However, continued expansion simply exaggerates every problem which exists today. British Socialism is the most concrete example of the failure of this type of program.*

Dr. Babb also warns against concentrating so much on the hospital that we neglect our central concern — the patient:

> *My personal view of the total problem is very simple! Not "What's wrong with the hospital of today?" but "What's wrong with the* PATIENT*?" We are too interested in ways of "making medical care stereotyped," and this cannot be done! Medicine has too long overlooked the GP and his knowledge of the total family picture . . . .*
>
> *Who better can give the medical significance of Mama's "inflammatory rheumatism" than the doctor who was in attendance at the time of illness? When this small addition to the present circumstance is added, the total care [of the patient] is greatly improved!*

Bravo, Dr. Babb! A GP's knowledge of the total family picture is, in our opinion, too, an indispensable requirement in the practice of good medicine. That's why in this column and in Dr. Fishbein's in the back of the book, so much emphasis is placed on the inestimable contribution the doctor can make—as a human being—to the welfare of his patient and on the need for encouraging the best young talent to pursue medical careers.

But regardless of how we feel on this page, in our news columns we will continue to print all sides of the important problems facing American medicine. So thank you, Dr. Babb, for your provocative comments and for raising these issues in the hope that they will help you—as you put it—"to be a better member of the medical profession." That, in fact, is an excellent summary of the main goal of MEDICAL WORLD NEWS.

M M Geffen

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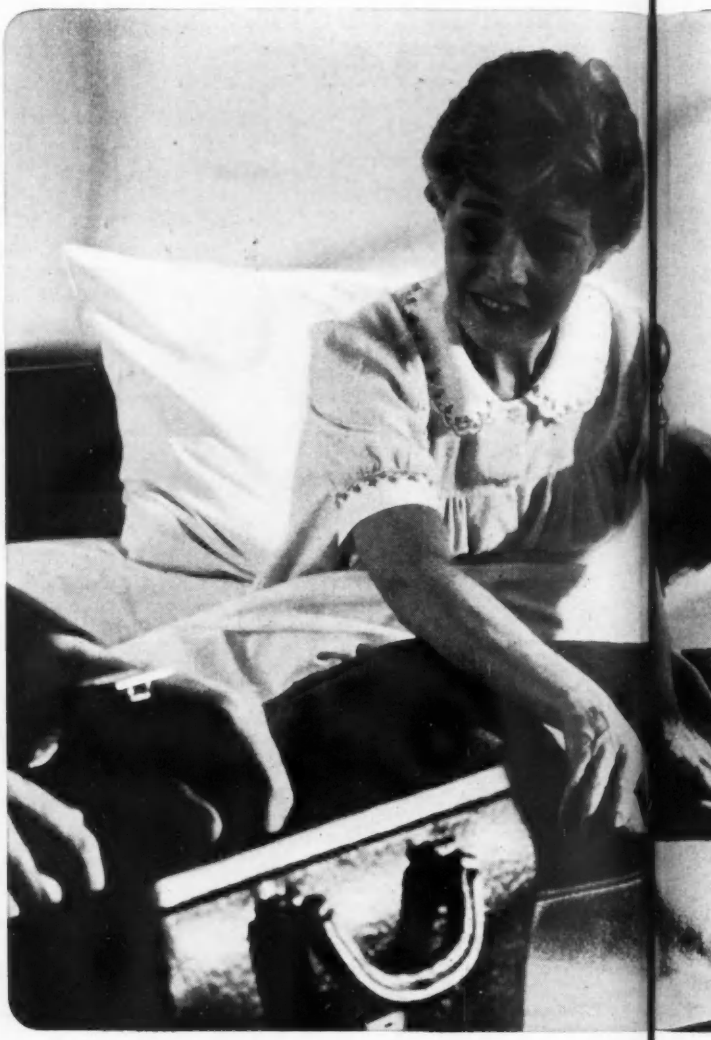

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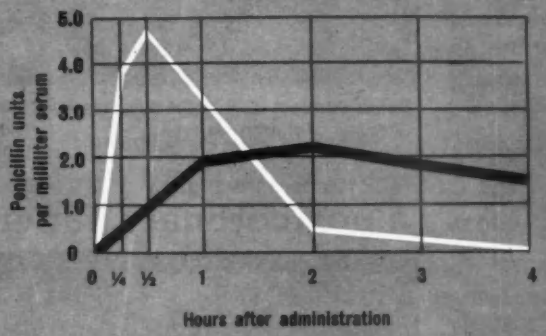

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References: 1. Peck, F.B., Jr., and Griffith, R.S.: Antibiotics Annual 1957-58, Medical Encyclopedia, Inc., p. 1004. 2. White, A.C., et al.: Antibiotics Annual 1955-56, Medical Encyclopedia, Inc., p. 490.

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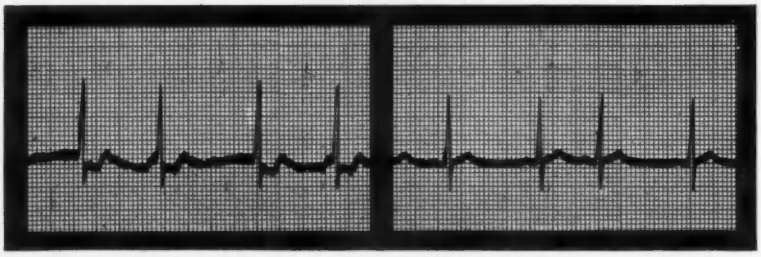
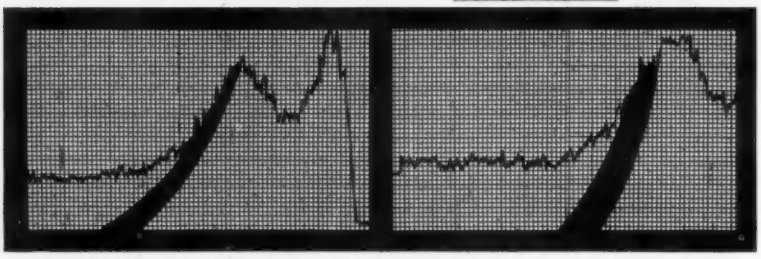


Before Peritrate—S-T segment depressed after standard exercise.

After Peritrate (20 mg. given 4 hours before exercise test) S-T segment now normal.

radioisotopic tracings of

a postcoronary patient without angina*



Before Peritrate—Radioisotopic tracing shows reduced myocardial blood flow (shaded area) after infarction.

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OUTLOOK

- **List gives sources of graduate study financing**
- **AMA seeks MD-volunteers for overseas missions**

MDs reluctant to use new drugs for fear of possible malpractice suits are turning to the AMA's newly revised "Medical Forms With Legal Analysis." Explaining the steps that must be taken in cases involving an experimental procedure or a treatment with drugs still under clinical investigation, the booklet cautions: "The patient's consent is an insufficient defense where the physician has deviated from the required standard of reasonable care and diligence." Copies of the booklet, containing 47 consent forms for a wide variety of procedures, may be obtained from the law department of the AMA, Chicago.

A lung cancer victim's $1,250,000 damage suit against Liggett & Myers is going to be tried a second time. The U.S. District Court of Appeals in Philadelphia reversed an earlier decision in favor of the cigarette company. In the first trial, five doctors' testimony that smoking could cause cancer was rejected by a judge who ruled that there was insufficient evidence for a jury to decide the facts.

That AMA commission studying medical care costs is now ready to set up three new research groups. One group will catalogue all the important medical developments since the turn of the century. It will then try to spell out their effect on medical care and costs. Another group will look into the various financing arrangements currently in use to see which has the highest utilization ratios. A third group will take up hospital admissions and length of stay in an effort to explain why hospital costs are rising so rapidly. The commission has decided, too, that it wants the public to understand something of the complex problems involved. It will distribute a pamphlet listing various research projects it has underway and telling why the commission was organized, identifying the various services and products that contribute to the total cost of medical care.

A speed-up in the eight-year college-medical school span is being developed jointly by Pennsylvania State University and Jefferson Medical College in Philadelphia. Beginning next September, a student will be able to get an MD in as few as five and a half calendar years after receiving his high school diploma by eliminating overlapping courses. Dean William A. Sodeman of Jefferson notes that Penn State now requires its pre-medical students to take such courses as microbiology, physiology, bacteriology, histology and embryology—all courses that are duplicated at Jefferson. Penn State has already taken the first step by adopting four-term, year-round instruction.

President Kennedy will rely on a newly appointed committee of 24 experts to help him devise new strategy against mental retardation, a problem the Government is already spending $26 million a year to help solve. The President has just proposed that a National Institute for Child Health and Human Development be made a special arm of NIH.

Only 7.6 per cent of June's college graduates are going on to become physical or biological scientists, according to the National Opinion Research Center at the University of Chicago. The Chicago study shows that mostly graduates with highest academic ratings go into astronomy, physics, math, medicine and the humanities. Another finding: Between the college freshman year and graduation, the fields losing the greatest number of candidates through change in career choice, are the natural sciences, engineering and medicine.

Doctors looking for information about graduate study financial help can get an assist from the Association of American Medical Colleges. The AAMC is offering a 197-page book that lists over 1,000 fellowships, scholarships and prizes covering more than 100 specialties. Copies of "Financial Assistance Available for Graduate Study in Medicine" may be purchased (for $3) from the AAMC, 2530 Ridge Avenue, Evanston, Ill.

A U.S. Court of Appeals decision may make things easier for charities that want to go it alone. In a recent case, the Court held that the city of Park Ridge, Ill., couldn't bar the Chicago Heart Association from conducting its own fund drive in the suburb. The unanimous decision by a three-judge panel declares unconstitutional a Park Ridge ordinance restricting charity collections to a single United Fund drive each

CONTINUED ON PAGE 24

year. In announcing their decision, the judges said the ordinance violates the 14th Amendment (due process and equal protection) and the first Amendment (free speech). Says an attorney for the Chicago Heart Association: "This decision clearly implies that all other charities will be treated the same way."

The AMA is looking for doctors to serve in foreign mission hospitals on a temporary basis. The Association's new Department of International Health will act as a clearing house for religious groups that sponsor medical missionaries. Like its drive to aid Cuban refugee physicians (Outlook, Oct. 27), this newest program is part of the AMA's effort to alert physicians to health issues outside the U.S.

February 1962 will mark the ninth year Lederle Laboratories will award $250,000 to outstanding medical school faculty members. Nominations for the Lederle Medical Faculty Awards Program are on their way now from medical school deans around the country to the seven-member awards committee, headed by Harvard's Dr. Maxwell Finland. The program is designed to give extra encouragement to worthy clinical teachers and scholars.

Add two more electronic computers to those already being used by the medical community. Item: The Commission on Professional and Hospital Activity at Ann Arbor, Mich., will analyze some 2,500,000 patient records with a new high-speed computer system. Item: The National Library of Medicine at Bethesda, Md., will tie its vast information storage and retrieval system to a computing mechanism. Both projects are due to go into operation early in 1962.

Salt Lake City is stepping up its enforcement of a 1907 Utah law that forbids smoking by anyone under 21. Any youths caught violating the statute must either pay a fine or sit through a two-and-a-half hour movie and lecture on "The Evils of Tobacco." Strong support for the anti-tobacco drive comes from a Salt Lake City chest and heart surgeon, Dr. Robert J. Beveridge. Says Dr. Beveridge: "There's not one beneficial aspect in smoking and there are literally hundreds of reasons for not smoking."

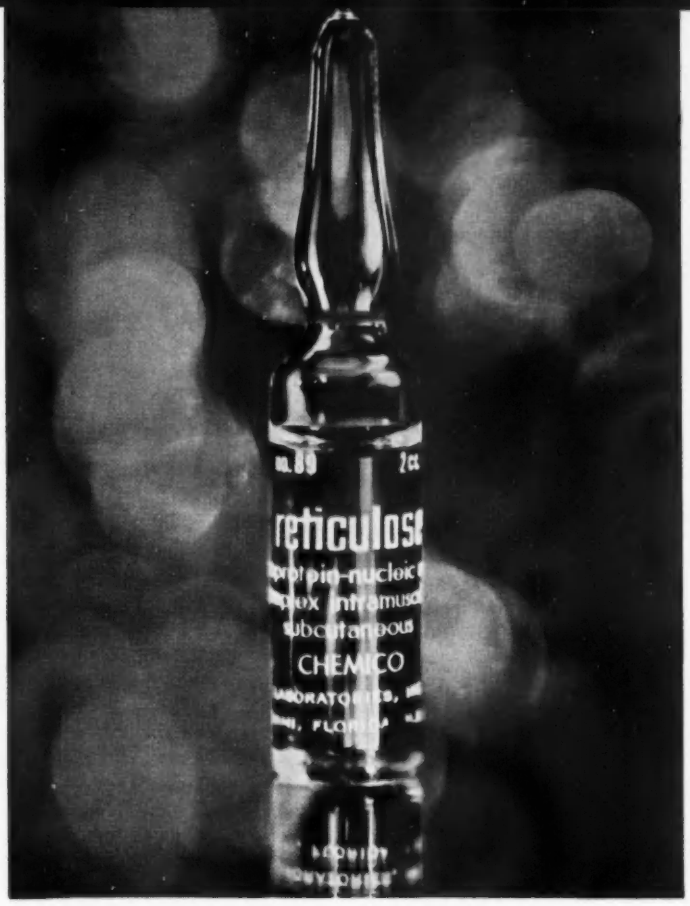
Tufts University School of Medicine is looking for a group of ten students with which to launch its new medical research program next July. By starting the course in mid-summer, Tufts plans to give the students six months for research during the first year and about four months during the second, in addition to the required pre-clinical courses. During the third year, the students will take the regular clinical program and continue their research if they wish during elective time in the senior year. Each will then be eligible to complete requirements for both a PhD and an MD degree.

The tenth "Grand Rounds," a series of closed-circuit telecasts for physicians, is to originate from Albert Einstein College of Medicine on Wednesday, Dec. 13. A panel of experts will consider cases of cerebral vascular accident, head injury and Parkinsonism on the "live" telecast. Sponsored by Upjohn, "Grand Rounds" will be seen in theaters in 12 cities.

Doctors in East Germany and East Berlin can no longer prescribe medications not available in East German drug stores. Until mid-October, East Berlin doctors frequently prescribed medications available only in West Berlin, saying they were better than the East German equivalent. In calling a halt to the practice, the East German Minister of Health said the ban is necessary to "avoid the danger that comes from the use of medicines not under government control."

MEETINGS

Nov. 16-18	Southern Thoracic Surgical Association, Memphis
Nov. 17-21	National Society for Crippled Children and Adults, Denver
Nov. 19-22	International College of Surgeons, San Francisco
Nov. 25-26	American College of Chest Physicians, Denver
Nov. 26-30	American Medical Association, Clinical Meeting, Denver
Nov. 26 Dec. 1	Radiological Society of N. America, Chicago
Nov. 27-29	American Society of Hematology, Los Angeles
Nov. 30 Dec. 2	American Medical Women's Association, Cleveland
Dec. 2-7	American Academy of Dermatology and Syphilology, Chicago
Dec. 5-7	Southern Surgical Association, Hot Springs, Va.
Dec. 7-9	New York Academy of Sciences Conference on the Cervix, New York
Dec. 8-9	New York Heart Association, Symposium on the Plasma Membrane, New York
Dec. 9-10	Academy of Psychoanalysis, New York
Dec. 12-19	Latin-American Congress on Microbiology, San Jose, Costa Rica
Dec. 17-18	International Congress of Comparative Pathology, Paris
Dec. 27 Jan. 6	Bahamas Surgical Conference, Nassau



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Bibliography: 1. Anderson, R. H., Thompson, R. M., Treatment of Viral Syndromes, Va. Med. Mo. Vol. 84-347 353, 7-57. 2. Scientific Exhibit, Va. State Medical Soc., Washington, D.C. Oct. 1957. 3. Symposium Viral Diseases, Miami, Fla. September, 1960. 4. Reynolds, R. M., Vaccinia, Archives of Pediatrics, Vol. 77 No. 10 Oct. 1960. 5. Wegryn, S. R., Marks, Jr. R. A., Baugh, J. R., Herpes Gestationis, American Journal Ob. and Gyn., Vol. 79 Apr. 1960.

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MEDICAL WORLD NEWS
November 10, 1961 Vol. 2, No. 23

BREAKTHROUGH IN SEARCH FOR COMMON COLD VACCINES

Spurred on by new findings, the National Institutes of Health expect to sign research contracts with drug firms within months

Even the most fervent optimist in common cold research hesitates to predict the availability of a really useful vaccine. But in both the U. S. and Britain, researchers have suddenly begun talking about workable vaccines in the foreseeable future.

MEDICAL WORLD NEWS has just learned that the National Institute of Allergy and Infectious Diseases is far enough advanced in basic research to ask pharmaceutical manufacturers to start work on vaccines under contract to NIAID. Dr. Justin M. Andrews, director of the institute, says that "by the end of this fiscal year we should have contracts out for a vaccine."

With its new million-dollar appropriation for common cold research, NIAID has been bearing down hard on the identification of causative agents — through work at Junior Village, an orphanage in Washington, D. C., and with prison volunteers, principally from Atlanta Federal penitentiary. The study has led to a fundamental conclusion: there's a limit to the number of different viruses that cause colds in a given environment. Much of the continuing pessimism about vaccines has stemmed from the enormous number of viruses thought to cause the common cold. (MWN, Dec. 16, 1960).

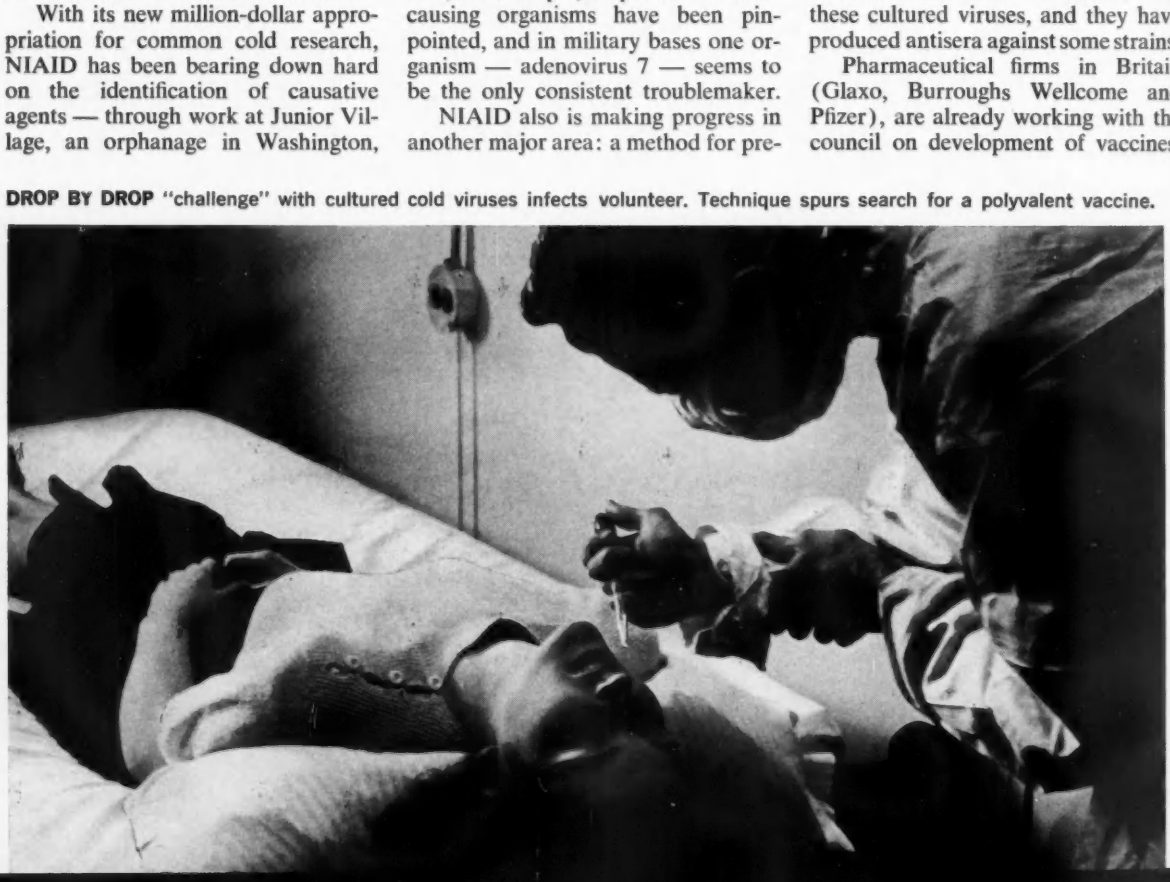
But Dr. Vernon Knight, clinical director of NIAID says the number of common colds "unaccounted for as regards etiology are on the downgrade." In the Junior Village population, for example, 75 per cent of cold-causing organisms have been pinpointed, and in military bases one organism — adenovirus 7 — seems to be the only consistent troublemaker.

NIAID also is making progress in another major area: a method for preparing adenovirus vaccine without inactivating the viruses in the process.

In Britain, the British Medical Research Council has just issued a report showing major new strides resulting largely from the big breakthrough in production of viruses. At Harvard Hospital in Salisbury, England, the world's only hospital devoted exclusively to cold research, a team under hospital director, Dr. A. D. J. Tyrrell, and investigator, Dr. H. G. Periera, has finally worked out the conditions required for consistently growing viruses in culture from nasal washings of infected volunteers. They have produced colds in other volunteers with these cultured viruses, and they have produced antisera against some strains.

Pharmaceutical firms in Britain (Glaxo, Burroughs Wellcome and Pfizer), are already working with the council on development of vaccines.

DROP BY DROP "challenge" with cultured cold viruses infects volunteer. Technique spurs search for a polyvalent vaccine.



DR. TYRRELL examines virus antisera.

DR. ANDREWS reveals plans for vaccine.

Behind the British success stretch 15 years of frustrated efforts to break the major bottleneck in the search for a common cold vaccine: inability to isolate cold viruses and determine their habits and characteristics. Unlike most major common cold studies in the U.S., which are focused on children, the British work involves only adults, and it is concentrated in one extraordinary lab.

Admirably Suited for Study

Before the United States entered the War, Boston's Harvard Medical School set up a small research hospital near this quiet British cathedral town to conduct pathological research into infectious diseases. The unit, initially staffed by members of the Harvard Medical School, was mainly concerned with epidemics expected under wartime conditions. It provided accommodations for about 30 patients who could be kept under observation in clinically convenient surroundings.

Some time after the war ended, the buildings were given to Britain. They were admirably suited for common cold research; a number of self-sufficient dwelling units within sight of each other and connected by telephone, but separated by plenty of open air and well-equipped laboratories.

The main business at Salisbury for ten years was to isolate the virus and to examine it serologically.

Attempts were made to infect conventional test animals, such as mice, with no results. Nor could the researchers manage to give colds to rats, chimpanzees, rhesus monkeys and a variety of other animals. The only satisfactory guinea pigs, they became convinced, were human beings. And for a long time the control of common cold incidence, even in these "ideal" subjects, was erratic .

To fill the need for volunteers, the council widely advertised: "Come to Salisbury Cold Center for a Ten-Day Free Holiday."

The idea was apparently of sufficient eccentricity to attract many Englishmen. For 15 years the supply of volunteers has never lagged. And they're still coming. Students have found that ten free days in comfortable accommodations with peace and quiet provide a wonderful opportunity to study for exams. Among the variety of people who have "graduated" from Salisbury are a number of couples who spent their honeymoons there. Fortunately, volunteers are incarcerated in pairs. The only outdoor activities permitted are country walks, for which there is plenty of scope. In fact, it is a boring but comfortable existence, especially if you don't catch cold. And only a small proportion of the 8,000 volunteers who have been to Salisbury since 1946 have caught a cold.

HONEYMOONER reaches out to get lunch.

The researchers have tried everything. In the early days, volunteers took hot baths and stood about in draughty corridors with little clothing on for a half hour or so. Some stood about in wet socks in winter. Hardly anyone got sick.

One or two brief moments of success—in 1952 and again in 1959—finally provided several clues to successful virus growth in culture.

The team has now grown viruses from 25 different colds in human volunteers. Most of these grow only in cultures of human embryonic tissue, but six strains of virus also can be cultivated in monkey kidney tissue cultures and in several lines of human cell origin as well. Most of the strains produce colds in other subjects after a period of cultivation. Viruses have been recovered from subjects infected with such cultures.

Some cultivable viruses, the British say, have even been recovered from nasal washings and kept in cold storage for up to nine years. They are still viable.

Since cold viruses still cannot be obtained in vast quantities, it has been a laborious task to make antisera against them by immunizing rabbits. Antisera have been prepared so far against only a few strains. Researchers at Salisbury are now certain that M strains (grown in monkey tissue culture) include at least two serological types, and that the H strains, grown in human embryonic kidney culture, include at least four serological types distinct from the two M strains. Further work, the team predicts, will reveal perhaps as many as 50 serological types of cold virus.

The Harvard Hospital team feels some confidence may be placed in the possibility that the rhinoviruses are at least the major source of infection among adults. And most happily, according to the Salisbury group, evidence so far suggests that antibodies to a particular strain do develop in the course of a cold. The level of active antibodies appears to be related to resistance to an infection with that particular strain. This, says the British team, offers real hope that vaccines against colds can be made, and that they will have protective value. ■

EPIDEMIOLOGISTS GET UNEXPECTED

At American Heart Association meeting, clinical studies give increased biological support to statistical data linking cigarette smoking and high-fat diets with atherosclerosis

The epidemiological association of cigarettes, fats, and other environmental and hereditary factors with the incidence of heart disease got another boost at the American Heart Association's annual meeting in Miami. Once again new population studies were presented in support of causative theories — but this time they were joined by several reports of experimental and basic research that fit the epidemiology.

One study, in fact, even suggests that smoking and fat are not separate items, but are intimately linked.

Dr. Alfred Kershbaum, of the Philadelphia General Hospital, told the meeting that he believes smoking increases free fatty acids in the blood in much the same way as stress. The mechanism, he explained, is that absorption of nicotine increases the release of epinephrine and norepinephrine, "which rapidly act on adipose tissue deposits to mobilize free fatty acids."

These mobilized fatty acids, when given over a short period of time, do not involve cholesterol or other triglycerides implicated in the formation of atheromas. But in animal experiments, a rise in cholesterol did occur when epinephrine was given over a longer period — 24 to 36 hours, Dr. Kershbaum said.

Smoking has the same effect as a shot of epinephrine, he noted, and clinical tests are now under way to find out if it does raise cholesterol in humans.

Presenting his latest results, Dr. Kershbaum said patients with healed myocardial infarctions had a much greater rise in free fatty acids from smoking than did normal patients. Seventeen coronary patients who smoked two cigarettes within a ten-minute period had a 65.6 per cent rise, compared to only a 24.6 per cent increase in normal patients.

This is brought about, the Philadelphia investigator suggested, by a greater release of catecholamine from the relatively anoxic tissue of myocardial infarction patients after nicotine stimulation.

Theorizing that the rise in free fatty acids from continued smoking may bring a rise in cholesterol as well, the researcher also noted that "our work lends some biological evidence to statistical associations."

In another report, Dr. Harvey F. Watts, of Temple University School of Medicine, described his study of atheromas in hearts taken at autopsy from patients with atherosclerotic or healthy arteries. Using a fluorescent antibody technique, he observed the deposition of serum lipoprotein — a combination of fats including cholesterol, with protein, which keeps them dissolved.

Dr. Watts reported that the lipoprotein perfuses the walls of healthy arteries directly through the endothelial cells and the intima into the internal elastic lamina and muscularis. From there the fluid enters the lymphatic system.

But even in the earliest atherosclerotic vessels, there are "striking intima accumulations" of blood lipoprotein in the mitochondria and within smooth muscle cells rather than in the fibrous cells as previously reported,

PHYSICIANS LOOK, LISTEN AND LEARN AT HEART ASSOCIATION

DEMONSTRATION of new lead system for taking EKGs during exercise (photo l.) is conducted by Dr. Ajit Datta of Sloan-Kettering Institute. **CUBAN** MDs Alfredo and Dionisio Lopez-Gomez (c.) examine specimen with tricuspid stenosis. **DIAGNOSTIC TEST** is taken by Dr. Howard Fuerst of Hollywood, Fla. (r.) given case history and clinical findings.

BOOST

the Philadelphia investigator said.

These accumulations come either from too much fat in the blood or from a breakdown of the enzyme system that burns up fatty acids for energy, Dr. Watts explained.

Microscopic examination of chemical reactions revealed that in some spots ATPase was missing or present only in insufficient amounts to release fat from vessel cells. It is in these areas of the artery linings, the Temple University researcher said, that fat accumulates and leads to the formation of atheromas.

Suggesting that too much lipoprotein in the blood "overwhelms" the enzyme-producing mechanism, Dr. Watts noted that "the first accumulation makes the cells swell. They keep taking the fat in but can't eliminate it. The cells may then die in one spot and become so swollen they look like fat droplets." He expressed agreement with the theory that "the more blood fat we have the more likely we are to get this disease."

Bolstered by this biological backing, epidemiologists proceeded to add to their findings in the search for a solution to the "disease of multiple causation":

DR. BRUNNER discusses lipid patterns.

▶ Two orders of monks provide a controlled population in environments similar except for diets, according to Dr. J. Gordon Barrow, reporting for a Georgia Department of Health research team. About 2,000 Benedictines and Trappists living in 25 different monasteries in the U.S and Canada have been studied since 1957.

The researchers found that among 1,252 Benedictines who eat an average American diet, 25 suffered atherosclerotic illness compared to only 3 of 684 Trappists, who eat no fish, fowl or meat. Markedly higher blood cholesterol levels were also found among the Benedictines.

That Benedictines drink the wine of their Order, is "not a factor in the U.S. as it is in Europe," Dr. Barrow said. Occupied mostly as teachers, few of them — only five — were heavy drinkers, he said.

▶ Two groups of Jews — evacuees from their ancient isolation in Yemen, and emigrants from cosmopolitan middle Europe — now live together in Israeli community settlements (kibbutzim). Cholesterol levels and heart disease incidence among these groups were studied by Dr. Daniel Brunner of the Government Hospital in Tel Aviv.

Noting that he had never seen a coronary patient among middle-aged Yemenites, Dr. Brunner said their cholesterol patterns were very different from those of European Jews. Generally, Yemenites had lower total serum cholesterol. In particular, they had higher "alpha" cholesterol percentages and lower "beta" cholesterol levels than the Europeans.

This is a "very reliable measure of atherogenic activity," he said. In his study of 305 coronary patients, 77 per cent had alpha levels under 20 per cent while healthy controls showed 37.5 per cent of the alpha fraction. As a result, Dr. Brunner suggested, "middle-aged people with lipids similar to

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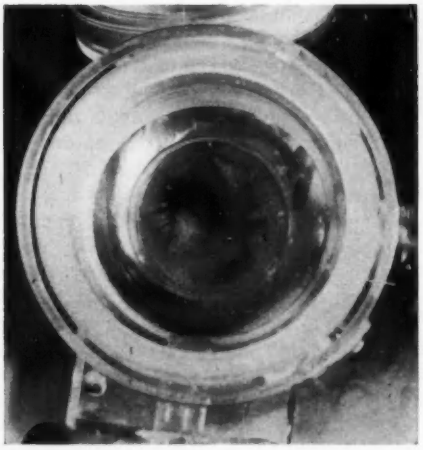
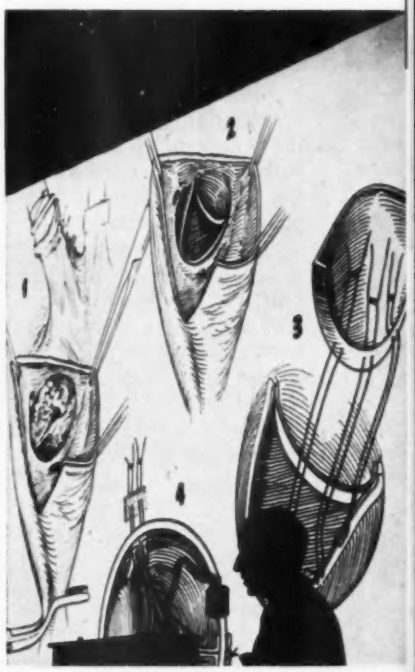




VALVE TESTER (photo l.) checks action of artificial heart valve before it is implanted. Machine duplicates heart beat, forcing water through prosthesis at normal blood pressure. **CLOSE-UP** under magnifying glass (c.) reveals mitral valve action in test beef-heart. **ILLUSTRATING** his technique, Georgetown's Dr. Charles Hufnagel (r.) reports on suturing teflon aortic valve replacements.

UNEXPECTED BOOST CONTINUED

Yemenites . . . have only very slight chances to join the large army of middle-aged coronaries."

▸ Pairs of Georgia twins, 26 identical and 26 fraternal, had blood cholesterol levels analyzed by Dr. John R. McDonough of Claxton, Ga., and his associates.

Identical twins in the 5- to 14-year age group showed an intrapair difference in cholesterol of only 7.5 mg per 100 cc while the non-genetically similar fraternal twins in the same age group showed a 22.6 difference.

This led researcher McDonough to conclude that cholesterol levels of the young are under genetic control. But, he cautioned, as identical twins grow older and leave their essentially similar childhood environment, the intrapair differences increase. He thereby emphasized that age and/or environment play a significant role.

▸ Epidemiologists again struck at cigarette smoking on the basis of population surveys in Albany, N. Y., and Framingham, Mass. Reporting for the two research teams, Dr. Joseph T. Doyle, Albany Medical College, said the incidence of heart attacks, the death rate from coronary heart disease, and mortality from all causes are three times greater among heavy cigarette smokers as compared to nonsmokers, pipe or cigar users or those who gave up the habit.

In fact, the survey shows that mortality among ex-cigarette smokers is slightly lower than that of nonsmokers, prompting the theory that former smokers had learned to live with their stress situations before giving up the habit while nonsmokers still suffered from pressure though they did not take it out through tobacco.

The findings regarding angina pectoris, however, were mixed: The incidence in Framingham is nearly twice as high in smokers as in nonsmokers, while in Albany, it is nearly three times greater in nonsmokers.

"The salient feature in both studies," Dr. Doyle maintained, "is the significant excess among cigarette smokers of myocardial infarction and of death from all causes including coronary heart disease." ■

SIMPLIFIED HEART BYPASS RESTS LEFT VENTRICLE

"Plenty of rest" is a typical prescription for muscle injury. But when it's the heart muscle that's damaged, it's easier said than done. Now, a three-nation research team has come up with another technique that may make it less difficult.

Called a left heart bypass, the nonoperative procedure allows blood already oxygenated by the lungs of the patient to be shunted away from the left ventricle, through a mechanical pump, into the aorta.

The procedure—termed by the researchers less complicated than a heart-lung bypass, or the recently reported Harken "counterpulsation" method (MWN, Oct. 27)—relieves the left ventricle of pumping to maintain normal blood pressure. It also eases pulmonary edema by lowering pressure on the left atrium. As a result, "marginal muscle which might otherwise die is permitted to recover," according to Dr. Clarence Dennis, Downstate (N.Y.) Medical Center, who reported to the American Heart Association on behalf of the team consisting of American, Argentinian and Swedish researchers.

In dog experiments, Dr. Dennis explained, full left heart bypass reduced oxygen utilization by half in the heart over control levels; lesser degrees of bypass reduced oxygen use markedly. The reduction is more a result of decrease in arteriovenous oxygen difference than of a lowered coronary sinus blood flow, he reported.

The technique requires placement of a stainless steel cannula down the jugular vein to the atrial septum. "We are now trying to learn to place the cannula without a fluoroscope," Dr. Dennis said. The sterile tubing then runs into a flowmeter (a siphon chamber 80 cm below the atrium), a roller pump and, finally, the femoral artery.

In a clinical test on a myocardial infarction patient, the pump "carried him for 12 hours, after which circulation was good (pink fingernails, normal urination)," Dr. Dennis stated, adding, "this technique should be helpful immediately after a coronary occlusion, or in myocardial infarction patients who can't maintain blood pressure."

GENDARME aims battery-powered tele

'PORTABL

The French medical profession and police force have teamed up to provide traffic victims with a unique first-aid service. The principle is as simple as it is ingenious: police emergency cars are equipped with small, portable TV cameras, transmitting equipment and two-way microphone hook-ups. Hospitals are supplied with TV screens and microphones.

When an accident occurs, police contact the nearest large hospital by phone. The attending physician tunes in his closed-circuit TV set and tells the policeman at the accident scene where to aim the camera. As the cam-

n camera at face of traffic casualty.

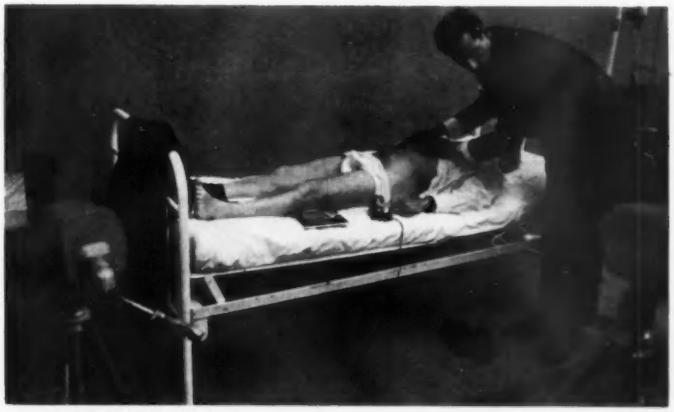
TV SCREEN in emergency room of hospital shows close-up of victim.

PHYSICIAN, using two-way microphone, instructs police as he finishes diagnosis.

BLE IAGNOSIS' FOR TRAFFIC VICTIMS

era scans the patient, the doctor watching the TV screen makes his diagnosis. He also can tell the policeman the proper first-aid measures.

If the accident is a bad one, and he decides that moving the patient will be dangerous, a specialist is immediately sent to the scene. But if the patient can safely be moved, the hospital staff goes into action. The emergency room is notified, specialists that may be needed are located and "filled in" on the television diagnosis, and if surgery is indicated, the operating room is readied for immediate use when the patient is wheeled in. ■



IN HOSPITAL, closed-circuit TV enables consultation with specialists.

HILL-BURTON ACT FACES CIVIL RIGHTS CHALLENGE

New York Senator plans move to bar further use of Federal money for segregated hospitals

Nothing could be more pernicious than racial discrimination and segregation in the life-and-death medical field. Yet, the existence in our country of racial discrimination in hospitals against Negro physicians and Negro patients is so clear as to demonstrate the urgent need for some corrective legislation. Government at all levels and medical societies need to extend themselves to correct these injustices."

With this blunt statement, Sen. Jacob K. Javits (R-N.Y.) has declared his intention to demand that Congress wipe out a long-standing but little-known provision in the Hill-Burton Hospital Construction Act that authorizes Federal grants for segregated hospitals.

Javits' move, which went almost unnoticed in the confusion attending the belated adjournment of Congress, threatens to become an embarrassing issue for the Kennedy Administration which has been championing the cause of civil rights on election campaign platforms and in Government action.

If the liberal New York Republican makes a strong issue of his demand next year—when he and many fellow Senators will be fighting for re-election—it will present the Administration with a major dilemma: support amendment of the Hill-Burton Act and run a risk of wrecking the whole Government hospital construction program, or back away from the issue and invite political retaliation by Negro voters.

HEW Secretary Abraham Ribicoff, taking off for a cross-country stumping tour to plug his programs, declined immediately to comment when questioned by MEDICAL WORLD NEWS. The Administration wants to give the matter some considered thought before committing itself.

The American Hospital Association also decided against making hasty statements. The AMA, while declining comment on Javits' specific charges, called attention to the fact that the House of Delegates had twice adopted resolutions urging member societies to lift restrictions based on race.

The bone of contention is a clause written into the original multi-billion-dollar hospital construction program. It states that an exception to a ban on discrimination will be made "in cases where separate hospital facilities are provided for separate population groups if the plan makes equitable provision on the basis of need for facilities and services of like quality for each such group."

"The system has meant second-class treatment for Negroes," Javits says. "It has relegated them to basement or attic wards and to the halls of some hospitals. Severe overcrowding is a rule. . . . Often, when Negro wards are filled, no additional Negro patients are admitted even though there may be empty beds elsewhere in the hospital."

SENATOR JAVITS would amend the law.

Although the Supreme Court has struck down the separate-but-equal principle and the Federal Government bans segregation in veterans hospitals, Javits charges that Hill-Burton funds have been dispensed to construct or modernize 90 segregated hospitals.

The Senator not only is attacking the segregation of Negro patients but the segregation of Negro physicians by hospitals and medical societies.

"Many qualified Negroes have been refused hospital staff appointments, not due to any lack of ability or preparation but simply because of the existence of a studied, systematic discriminatory program of exclusion."

The AMA House of Delegates, according to Sen. Javits, rejected a resolution proposed by the New York Medical Society which would have barred medical societies from denying membership to any physician because of race. The Hawaiian Medical Society proposed that medical society membership as a condition for hospital appointments be dropped, but this also was turned down. Javits said both the AMA and its member societies declined to take the lead in eliminating the discrimination.

In the case of medical schools, the legislator is also hitting hard, charging that 11 southern schools still bar Negroes: Medical College of South Carolina, Emory University, University of Alabama, University of Mississippi, University of Louisiana, Tulane University, Baylor University, University of Tennessee, Vanderbilt University and Bowman Gray Medical College.

Possible Political Embarrassment

Sen. Lister Hill, powerful Democratic chairman of the Senate Labor and Public Welfare Committee and author of the hospital construction law, comes from Alabama where the medical school still allegedly practices segregation. And a former vice president of Emory, Boisfeuillet Jones, is Sec. Ribicoff's top medical affairs adviser and a confidant of Hill.

All of these circumstances are making the Javits move exceedingly embarrassing to some key Democratic leaders. Although President Kennedy made civil rights one of the chief issues in his election campaign, many integration leaders have complained that he has been lagging on civil rights legislation.

If Javits makes a strong issue of his proposed amendment, it will be difficult for Democratic liberals, especially in a Congressional election year, to avoid taking a stand. The same will be true of the Administration. The one possibility may rest in Sen. Hill.

The Javits proposal will be handled by Hill's committee. Regardless of the speeches made, many observers think this veteran of legislative skirmishes will find a way to avoid any action at all.

Whatever happens, Senator Javits is putting a lot of people on the spot, the medical profession as well as the Democratic leadership. ■

SANDED BURNS TELL NO TALES

A Belgian plastic surgeon applies the 'skin sanding' method to severe burns with some startling results. No infections occur, grafting is unnecessary, and patients have no scars

Much of the difficulty in treating a severely burned patient comes from necrosis of tissues, which interferes with the formation of new skin, causing deformity and often irreparable scarring. Surgical removal of the tissue is a painstaking task, and the use of homografts or temporary dressing seldom results in scarless, homogeneous restoration of the affected area.

Yet, there is a way to bypass the usual lengthy, unsatisfactory procedure, and to obtain near-perfect results, reports Dr. Jean Lorthioir, chief plastic surgeon at the St. Pierre Hospital of the University of Brussels, Belgium. The technique: immediate removal of all burned skin, using a specially designed high speed (20,000 to 25,000 rpm) abrasive drill.

Dr. Lorthioir has scraped some 200 patients in the last two years, and finds his method more satisfactory than any other. It is easy, leaves minimal scarring, or none, and usually requires no perfusion of plasma or serum. It also minimizes auto-intoxication, and is rapidly performed (one hour to scrape about 80 per cent of the body of an adult). Presenting clinical results and illustrations at the Tenth International Congress of Aviation and Space Medicine in Paris, Dr. Lorthioir reported that his method has permitted him to save patients with burns covering up to 90 per cent of their bodies.

'Surprisingly Little Pain.'

He described his procedure thus:

As soon as possible after a burn accident the patient is rushed to the hospital and anesthetized. All burned surfaces are then rapidly abraded. A plastic disk, to which fine ruby dust has been glued under pressure, is operated by a dental (or any rapidly rotating) drill. Abrasion is applied until the patient bleeds, an indication that necrotic tissue has been removed. Usually bleeding is almost instantaneous, but in the case of third-degree burns, there will be none, says Dr. Lorthioir. A true third-degree burn is thus diagnosed when the white fatty surface appears under the drill.

The abrasion can be carried out on any part of the body—including the face and hands. A smaller disk is used for the eyelids. At the end of the procedure there is no trace of burn. "It is surprising," says the surgeon, "how little pain there is when the patient comes out of anesthesia."

If burns have covered no more than 25 to 30 per cent of body surface, the patient is left naked and without dressings, to dry in the air. If the burns include all areas of the body, Dr. Lorthioir places the patient on his back in a specially designed sterile tank for eight days. His head protrudes for feeding, and oxygen is fed into the tank to accelerate healing.

Twelve hours after the scraping the patient is dry, says Dr. Lorthioir. There is no plasma loss or suppuration in the skinned patient as there is in the

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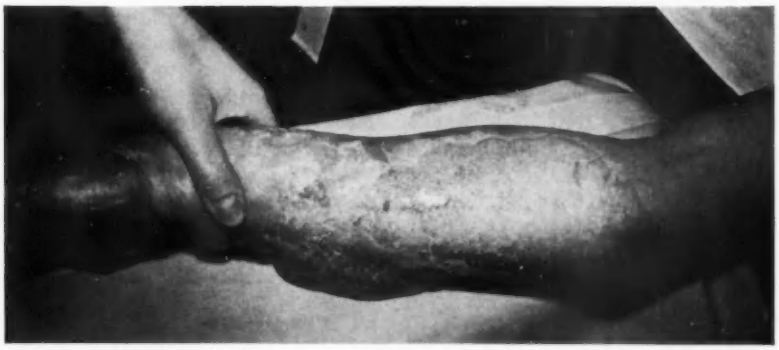
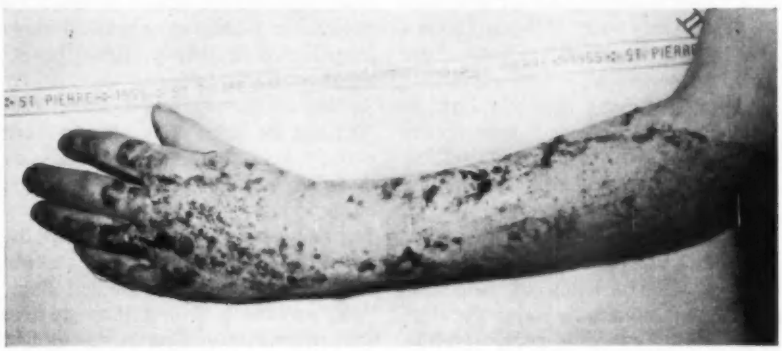
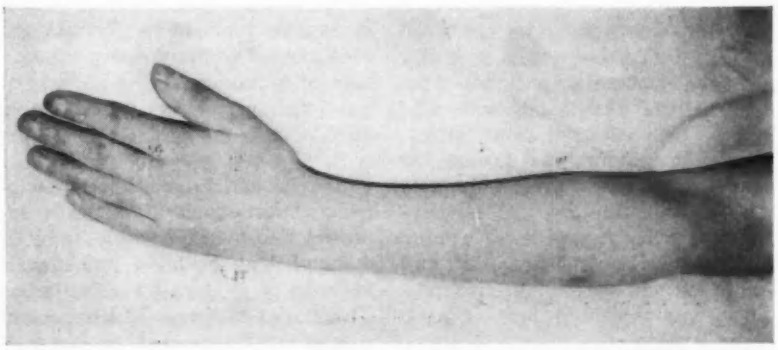


BURNED arm and hand can be treated immediately; scraping needs no preparation.



SANDED skin shows mosaic pattern 14 days after high-speed abrasion with ruby dust.



HEALED limb, four weeks after the sanding, is completely free of typical burn scars.

SANDED BURNS CONTINUED

burned patient, and no infection. The body becomes covered with a fibrin layer, which is sometimes painful around flexion spots, but which comes off in about 12 days, leaving no trace of second-degree burns, and few of third-degree burns. (There usually are enough dermis fragments left even in third-degree burns to provide a frame to start restoration of the skin.)

Thirty days after the scraping, all of the skin has been restored. It often has a winey color which returns to normal after a few months.

In nearly all cases, the procedure eliminates scarring. "I have never had an infection, never had to make grafts, and generally use no plasma. I simply give the patients enough fruit juices or other liquids," he reports. "If necrotic tissue were left, on the other hand, the patient would lose liquids, and, like a leaky barrel, would have to be constantly filled."

The most dramatic case, shown in a movie to the congress by Dr. Lorthioir, was that of two helicopter pilots, burned by gasoline on roughly half of their body surfaces. With amazing rapidity, the drill is shown passing over the burned areas, tissue peels, is washed off and the body becomes vividly red. The drill also passes over the face, ears, eyelids, leaving an almost unrecognizable red mask (yet, the plastic surgeon says, healing of the face presents no particular problems). Then the fibrin layer forms and the patients, who can slowly walk around, look like mosaics of skin and stiff leather. A few months later, no signs of the accident are apparent.

Abrading burned areas, he has found, is particularly effective in children with such typical injuries as scalding by hot water. After the scraping, the body of a child can dry in as short a time as six hours, particularly if hot air is used to accelerate the process. The fibrin layer falls off more quickly than in adults, and the child can frequently leave the hospital 12 weeks after the accident.

Dr. Lorthioir's radical method is now the only one used at his hospital to treat severe burns. ■

ARMY ELIMINATES ANTIBIOTICS IN BURN CARE

Antibiotics are being withheld from most incoming burn patients at the U. S. Army Surgical Research Unit at Brooke Army Medical Center, Fort Sam Houston, Tex.

The experiment, begun in June, is producing "encouraging" results, according to Lt. Col. John A. Moncrief, 37-year-old general surgeon and commanding officer of the unit.

SRU generally treats only severe burn cases in its 28-bed facility. It has burn teams consisting of surgeons, nurses and corpsmen, who fly anywhere in the nation to pick up badly burned military personnel or their dependents and return them to San Antonio for treatment.

"If a patient is brought in with a compound fracture or pneumonia, we don't hesitate to treat him with antibiotics," Dr. Moncrief says. "Otherwise, we have found that loading the patient initially with drugs only gives infecting organisms time to become resistant. When the patient reaches the stage in which septicemia sets in, you're left without any effective antibiotic with which to fight it," the Army surgeon added.

SRU treats about 130 burn patients each year, and more than 25 incoming patients in the test have been withheld from antibiotic therapy since the experiment began in June.

Dr. Moncrief, emphasizing that "it's the infection that kills in burn cases," says that a key to holding down infection is "getting an adequate auto- or homograft on in time."

SRU procedure is to excise the eschar and burn "right down to the muscle" as soon as the patient stabilizes, preferably within three to five days after injury. Grafts are applied about 48 hours later.

As to the organisms that present the greatest problem in infections, Dr. Moncrief said: *"Staphylococcus aureus* used to account for 65 per cent of the infections. Now, *Pseudomonas aeruginosa* is the problem in 77 per cent."

Dr. Moncrief notes that pseudomonas infections are "practically impossible" to overcome with antibiotic therapy. And, he adds, "we are attempting to produce a vaccine in our laboratories and have had some success in rats."

PLASTIC sticks like taffy on artery wall.

PLASTIC SPRA

Boston neurosurgeon covers cerebral vessel wall in an elastic 'coat' to prevent re-rupture

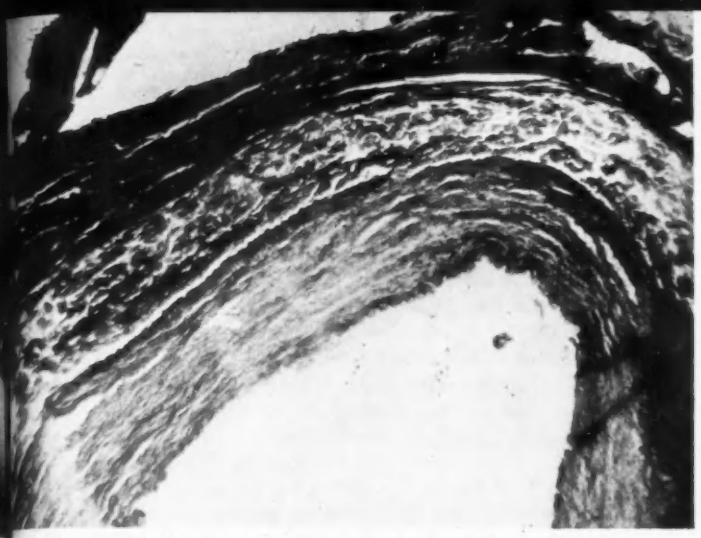
Sometime during the critically dangerous period when an intracranial aneurysm threatens to re-rupture, Dr. Bertram Selverstone exposes the vessel, aims an artist's airbrush at it, and begins to apply short, careful bursts of plastic spray. For the next several minutes, he alternately sprays and dries.

When the threatened vessel is completely enveloped in plastic, resin is applied for strength and Dr. Selverstone closes the craniotomy. Within hours, the resilient adhesive overcoat is fully "cured." The reinforced vessel can now withstand pressure of about 1,200 mm of mercury.

Rationale of Procedure

Describing this new technique to the Congress of Neurological Surgeons in New York, Dr. Selverstone, neurosurgeon-in-chief of the New England Center Hospital, Boston, and professor of neurosurgery at Tufts University explained his rationale:

A large number of intracranial aneurysms can't be treated by excluding them from the circulation. In fact, only a minority of aneurysms have a "neck" that can be safely clipped off. Ligation of the carotid artery in the neck, Dr. Selverstone notes, doesn't afford full protection against subsequent rupture. Wrapping with muscle is only effective after protective fibro-



COAT of resin (black) allows vessel to withstand 1,200 mm Hg pressure.

DR. SELVERSTONE exhibits life-saving method.

REINFORCES ANEURYSMS

sis has occurred. And this takes three weeks or more.

Reinforcing the aneurysm with a flexible, adherent skin of plastic is the answer, Dr. Selverstone believes.

Crucial to the success of the new technique, he points out, is the right kind of plastic. British investigators first tried the use of plastics in 1956, but they used a substance that hardened without adhering to the vessel. This unattached cuff created a potential "dead space."

Dr. Selverstone, who has applied the technique in 17 patients since 1956, uses a material chemically similar to the transparent, moisture-proof Saran wrap sold in groceries.

The operation is performed while the patient is under mild hypothermia. First he dries the moist surface of the aneurysm with helium blown gently through the artist's airbrush. Helium, he explains, has no shock effect on the artery, since it is both chemically inert and is the only gas which warms on expansion; other gasses might chill the vessel and throw it into spasm.

SPRAYER (r.) aims to coat aneurysm.

Plastic Sprayed On

Then, for a few seconds, he sprays an "intimately adherent, flexible, nontoxic dry film" on the lesion and nearby parts of the parent artery. This plastic substance, polyvinyl-polyvinylidine chloride, is dried by another quick burst of helium.

Several more layers of plastic are sprayed on. Together, they comprise the primary coat, which gives enough strength to the aneurysm to allow the further handling needed in some cases.

The secondary coat consists of a reinforcing resin, which Dr. Selverstone applies with a spatula. He closes the craniotomy immediately after this step, although the resin takes several more hours to dry.

In his 17 cases so far, Dr. Selverstone says he has obtained the best results in instances when it was not necessary to sacrifice any part of a major vessel associated with the aneurysm. He considers the results "excellent" in nine of these. All returned to work and are free of neurological deficit. The results are "good" in four others who have slight deficit.

But in the four cases in which one or more vessels had to be interrupted to stop bleeding, results were "variable"—one excellent, one good, one poor, one failure.

Concludes Dr. Selverstone: "Time alone will indicate whether the application of reinforcing plastics to sessile aneurysms should be used routinely or only in selected cases."

Preliminary data on results of another technique were reported to the same meeting by Dr. Hajime Handa, instructor in the first surgical division of the Kyoto (Japan) University Medical School. He uses a different kind of plastic applied in only one coat.

In his search for a satisfactory plastic, Dr. Handa developed a method of experimentally inducing aneurysms in dogs that rupture spontaneously in eight to 14 days. By applying various plastics to the aneurysms that formed, he selected a mixture which he believes offers the most protection in the shortest time.

No Time for Follow-up

The substance is a combination of three plastics; one each for hardness, elasticity and adherence. He paints this sticky substance on the aneurysm with an ordinary brush and dries it in three to five minutes with warm air from a hair dryer. In one case, he clipped the aneurysm before applying the plastic.

Two of the three patients he has operated on have returned to their usual occupations and have no neurological problems, he reports. There has been no time for a follow-up on the third patient, since "I performed the operation just before leaving Japan for this meeting," he explained. ■

NOBEL PRIZE FOR COCHLEAR WORK

Harvard physicist wins medical award for hearing mechanism study started 30 years ago

When a slight, bald man with a tiny white mustache walked into New York's Waldorf-Astoria to receive a medal from the Deafness Research Foundation, he could not hide his surprise—and embarrassment—as scores of reporters enveloped him with questions and exploding flashbulbs. For the shy, 62-year-old Harvard University physicist, Georg von Bekesy, had not yet heard the news that had flashed across the world while he was flying from Boston to New York.

"Why so many reporters?" he asked.

"The Nobel Prize," said one reporter, showing him a news dispatch from Stockholm.

"I?" Dr. von Bekesy looked stunned. "I alone?"

"You alone, sir."

"I am very happy about this," he added in a heavy Hungarian accent, slowly recovering from his surprise. From then on, the Nobelist, who "likes a lonely life," said little more.

Dr. von Bekesy (pronounced BEK-eshee) was born June 3, 1899, in Budapest, where his father was in the diplomatic service, and where his mother, brother and sister still live. After earning a PhD in physics at the University of Budapest, he became a research physicist with the Hungarian telephone system, a position he kept for 20 years. From the study of microphone acoustics, he became interested in the mechanism of hearing, eventually furnishing experimental verification for nearly everything that is known about the work of the inner ear in converting the mechanical energy of sound into impulses received by the brain. Since 1948, he has been a researcher in psychophysics at Harvard University.

Microscopes and Models

A keen experimentalist, Dr. von Bekesy created mechanical models with which he demonstrated the function of the three parts of the ear. He also used the microscope and stroboscopic illumination to show the pattern of vibration of tiny particles introduced into the ear of a corpse—a pattern similar to the vibrations of a microphone.

Different pitches, he found, did not make different fibers of the cochlea vibrate, as earlier believed. Instead, he showed that the vibration is carried along the basilar membrane to a point of maximal amplitude. This point is determined by the particular pitch of the sound: This is where the sound is registered.

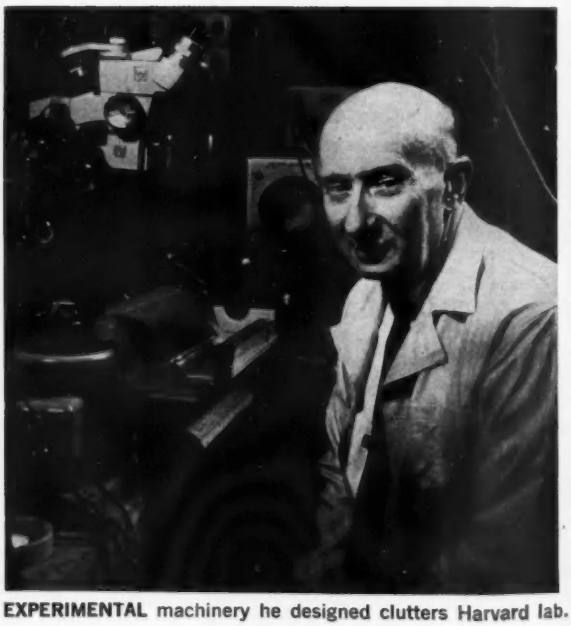
After devoting nearly 40 years of his life to the physiology of sound, and earning a reputation as "the man who knows more about the ear than anyone else," Dr. von Bekesy still admits that much of the mechanism of hearing is not understood. Now, in addition to his work on the physiology of hearing, he has undertaken the study of the physics of skin sensations and visual perception. His small Harvard laboratory, where he spends 12 to 14 hours a day, is cluttered with experimental machinery, mysterious to everyone but himself.

Dr. von Bekesy also has designed an audiometer to test the functioning of the cochlea and help determine whether deafness is caused by damage to the ear or to the brain.

He has been awarded many prizes and degrees (among them, two MDs), but remains as retiring as ever, and unchanged by the honors.

Concentration in a field of research requires loneliness "to a certain degree," affirmed bachelor von Bekesy before disappearing from the public eye. This solitude, he believes, is not to be feared by the scientist for "if someone is a scientist, he loves to work on some problem." ■

DR. VON BEKESY is mobbed by reporters at Waldorf-Astoria.



EXPERIMENTAL machinery he designed clutters Harvard lab.

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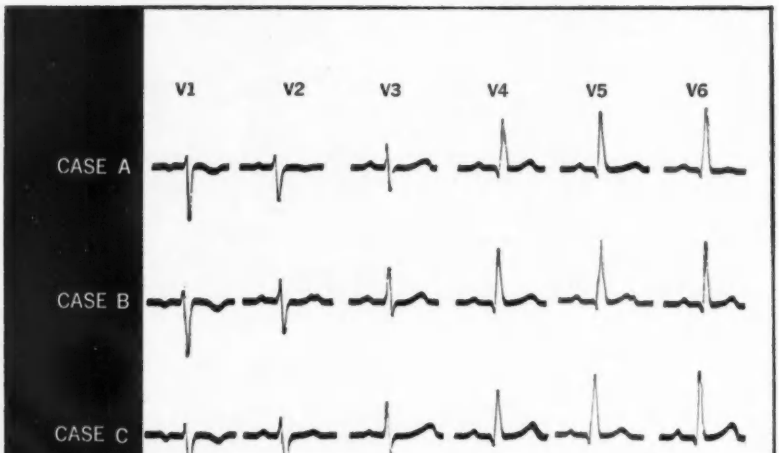
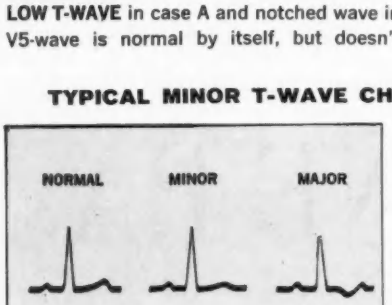
SIGNIFICANT MINOR CHANGES – PRECORDIAL LEADS

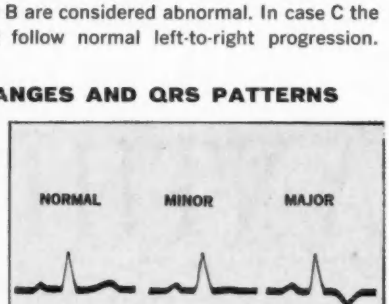


LOW T-WAVE in case A and notched wave in B are considered abnormal. In case C the V5-wave is normal by itself, but doesn't follow normal left-to-right progression.

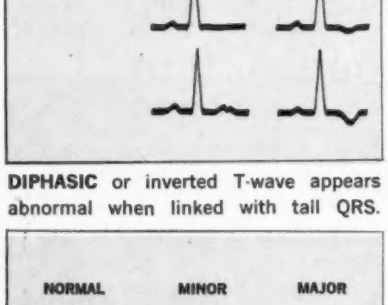
TYPICAL MINOR T-WAVE CHANGES AND QRS PATTERNS



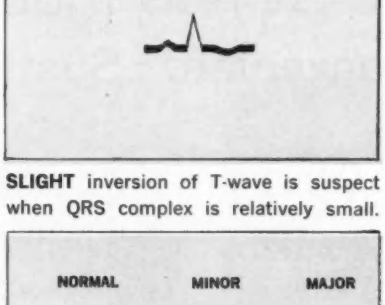
DIPHASIC or inverted T-wave appears abnormal when linked with tall QRS.



SLIGHT inversion of T-wave is suspect when QRS complex is relatively small.



DEEP inversion is abnormal in a T-wave following small, splintered QRS.



ISOELECTRIC T-wave is significant if the QRS is very small — 3 mm or less.

MINOR SHIFT

Statistical study shows that even slight EKG alteration in 'normal' persons is associated with abnormal mortality rates

When the "normal" electrocardiogram of a normal person shows a minor change in the T-wave, the alert clinician should consider it a red flag. It may signal potential coronary disease — especially if the patient is a man between 40 and 69 years of age.

Statistical support for this warning comes from Dr. Charles Kiessling, associate medical director of the Prudential Insurance Company of America, who says insurance carriers are already beginning to rate their applicants in accordance with these findings.

At a meeting in New York of the Association of Life Insurance Medical Directors, Dr. Kiessling ticked off the findings from a long-term study including persons whose EKGs showed T-wave changes and controls whose electrocardiograms were unquestionably normal:

- Patients with minor T-wave changes in the absence of any known coronary disease had a far higher mortality rate than controls.
- Their death rate from coronary occlusion was also higher.
- The number who developed coronary disease after the EKG was greater.
- The heaviest mortality rate in this group occurred in the first five years after the EKG examination.

"T-wave changes may be evidence of latent coronary disease or may be a premonitory sign of a subsequent coronary occlusion," Dr. Kiessling declared.

Opposite Point of View

These minor T-wave changes, he emphasized, could easily be ignored by a physician if the patient is free from coronary symptoms and has no previous history of heart disease.

"The tendency in these cases is to say, 'Well, there's been no problem, so there's nothing to worry about.' Our findings make us take an opposite point of view," Dr. Kiessling asserted.

His follow-up period for both the normal and control groups averaged eight years.

N T-WAVE MAY SIGNAL DANGER

The controls and the group showing T-wave changes were culled from 30,000 electrocardiograms on 11,000 persons dating back to 1933. Although there were many instances of T-wave changes associated with cardiovascular problems in this group, only individuals fulfilling the following four requirements were selected: 1) The electrocardiogram showed only T-wave changes and was normal in all other respects; 2) The individual showed no other evidence of any disease, either cardiovascular or non-cardiovascular; 3) There was no history of suspicious chest pain, and 4) The individual was a male between the ages of 40 and 69.

("Results would probably have been very different in a younger age group or one including women," Dr. Kiessling pointed out.)

Low, Tall, or Notched

In the study, a minor T-wave change was "one that is relatively low when compared to the amplitude of the QRS complex." For example, "if the QRS complex is tall and upright one would expect a rather tall, upright T-wave," and therefore a minor T-wave change would be one that is "relatively low to isoelectric, or is notched."

If the QRS is smaller, even some of the slightly inverted T-waves would be classified as "minor" changes. And in very small, splintered QRS complexes, "deep inversion was considered a minor change and there were no major changes," (see diagrams opposite page).

Dr. Kiessling's screening yielded 422 individuals who fulfilled the criteria. Comparison of this group with 1,805 controls revealed that their rates of subsequent coronary occlusions, mortality from coronary occlusion and total mortality were as much as twice as high.

Six per cent of all controls developed subsequent coronary occlusion, and 145 died during the study period, a mortality ratio of 78 per cent of the expected rate for the general population. Thirty-six per cent of the deaths were from coronary occlusion.

But among those who showed minor T-wave changes, the coronary occlusion rate was 12 per cent, and 65 persons died — a mortality rate of 166 per cent of the expected. Forty-nine per cent of the deaths were from coronaries.

Major T-wave changes, Dr. Kiessling pointed out, do not present such a problem, since they generally occur among persons with other evidence of disease. Among the 11,000 persons studied he could find only 46 who showed major T-wave changes but no disease.

All the others were found to have hypertension, an organic murmur, a history of suspicious chest pain, coronary disease, or some abnormality.

Not all the minor T-wave changes, he added, are evidence of cardiovascular disease, but "some of them appear to be. Which ones, we cannot say. The question is how frequently T-wave changes are the manifestation of latent coronary artery disease. . . . We think our findings are not only valid but reasonable." ■

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TAPS FOR TATTOO PARLORS

Calling the studios a serious source of hepatitis infection, New York City's Department of Health has closed them down and has ordered the tattoo artists to hang up their needles

Artistic expression was dealt a serious blow in New York City last week when the Department of Health ordered the closing of the city's eight tattoo parlors. Reason for the ban: Since 1959, 30 cases of serum hepatitis have been attributed to tattooing. Of the city's 1,529 cases this year, 13 have been traced to the tattoo artists' needles.

Concluded the Department: "Since it is an impossibility to supervise each tattooing establishment to insure proper sterilization, a complete ban on tattooing, except for medical purposes, is the only feasible means of safeguarding the public against the disease." Under the new amendment, only persons licensed to practice medicine may tattoo humans. The ban does not cover tattooing animals.

It is estimated that upwards of 10,000 persons annually are epidermically decorated in the dingy parlors near Manhattan's waterfront and Coney Island's boardwalk. The clients have been mostly seamen celebrating Motherhood, True Love and Patriotism, but in recent years teen-age land lubbers have, in moments of bravado, had themselves adorned.

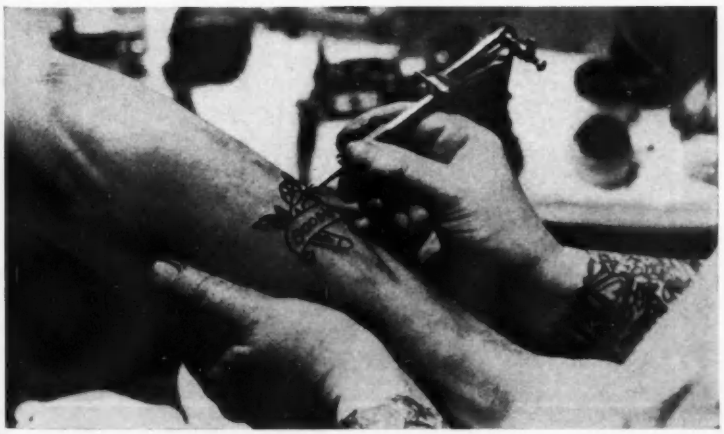
The "artists" say they will defy the ban; go underground, if necessary. They defend their trade as both artistic and sanitary. One Eighth Avenue practitioner said heatedly: "Look, we sterilize our needles, we sterilize our inks, we run a high-class shop. So do the other boys."

The parlors have threatened to form an association and take their case to the State Supreme Court. And in their defense a New York physician wrote to *The New York Times*: "It would be kinder and more appropriate for a benign government to prescribe sterile practices than brusquely to eliminate some peoples livelihood."

But the tattoo artists appear doomed, not only in New York but in other cities. In Chicago, health commissioner Dr. Samuel L. Adelman announced that board of health inspectors had been checking the parlors, and while he didn't yet recommend a ban, he asked for tighter supervision. Other cities are considering similar measures.

But connoisseurs of the art can take heart. The New York City Health Department has admitted that tattooing is a pretty tenacious custom. "It will take more than hepatitis to wipe out 4,000 years' work." ■

LADY TATTOOER exhibits own art while needling 'Good Luck' on client's arm.



CUSTOMER contemplates tattoo catalogue.

ORAL P-12 HITS RESISTANT STAPH

New synthetic penicillin is reported more active against staphylococci than methicillin

The newest synthetic penicillin, P-12, is the first such drug to be orally effective against resistant staphylococci, according to reports presented at a New York City conference on the drug.

P-12 (5-methyl-3-phenyl-4-isoxazolyl penicillin) was developed by Bristol Laboratories. When it is approved by the FDA, it will be marketed as *Prostaphlin*. Like its chemical relative, methicillin, its action is bactericidal. The agent is effective against resistant staphylococci, but only moderately active against penicillin G-sensitive organisms. Unlike methicillin, which is destroyed by gastric acid and must be injected, P-12 resists acid hydrolysis and can be given orally.

Approximately 500 patients with a variety of infections, including pyodermas, septicemia, bacteremia, osteomyelitis and enteritis, have taken the new drug. "Evaluation is difficult because of the conditions treated," said conference chairman Dr. William M. M. Kirby of the University of Washington School of Medicine, "but results appear to be uniformly good."

May Have Fewer Side Effects

For example, *in vitro*, P-12 is five to eight times as active as methicillin, and in severe infections treatment results have been somewhat better than with methicillin. Of 111 severe infections treated with P-12, 93 (83 per cent) were cured, 16 improved and two were treatment failures.

Reactions to P-12 have consisted mainly of gastrointestinal disturbances, as would be expected with an oral antibiotic. The investigators also reported a few instances of skin rash, but said it is too early to determine the incidence of side effects.

However, P-12 may prove safe for patients who have had reactions to other penicillins. Dr. Vernon Knight of NIAID reported on three pediatric patients who had had reactions to methicillin. "We have given P-12 to these children and have had no reactions. I suspect this is due to the route of administration," he said.

While the exact dosage of the new penicillin is yet to be determined, Dr. Ellard Yow of Baylor University College of Medicine suggests 500 mg four times a day as the minimal dose in staphylococcal infections, remarking that he "would be hesitant to treat a seriously ill patient with less than six grams a day."

One problem which bothered most of the investigators — as it does with use of any drug for stubborn infections — is recurrence of chronic infections after cure. Although cultures became negative for staphylococci during therapy, some lesions recurred as soon as P-12 was stopped.

Although the "staphylococcal problem" remains, the speakers agreed that P-12 is a useful drug in resistant staph infections, and since it can be given orally, many patients who now have to be hospitalized may soon be treated at home. ■

CASE OF THE SURGICAL ADDICT

Pollyanna, who used "denial" so effectively, glowed with pleasure on receiving crutches as a gift—because she was "so glad" she didn't need them. She has a modern counterpart.

In a paper entitled "The Perils of Pollyanna—Some Observations on the Polysurgical Phenomenon," Dr. Lawrence L. Washburn of the Ochsner Clinic, New Orleans, says the typical denial mechanism is a factor in surgical addiction cases he has encountered. He describes the case history of a 40-year-old woman who has few peers among surgical "repeaters."

"At 16, she had an appendectomy," Dr. Washburn told the Southern Psychiatric Association. "At 21, a plastic repair of her ovaries was made, followed the next year by a cesarean section for her first pregnancy. A live male child resulted.

"At 26, her second and last pregnancy was terminated with a cesarean section followed by hemorrhage, many transfusions and a prolonged hospital stay. The following year she had a hysterectomy; she later believed that all of her organs were poisoned.

Incision of the Breasts

"At 34, she had an incision and drainage of her left breast for abscesses, followed a short time later by a laparotomy for adhesions. Within a few months she had some type procedure on her urethra and, also, a cervical conization. That same year she had an incision and drainage of the opposite breast for abscesses, and within a short time had one breast removed for a nonmalignant lesion.

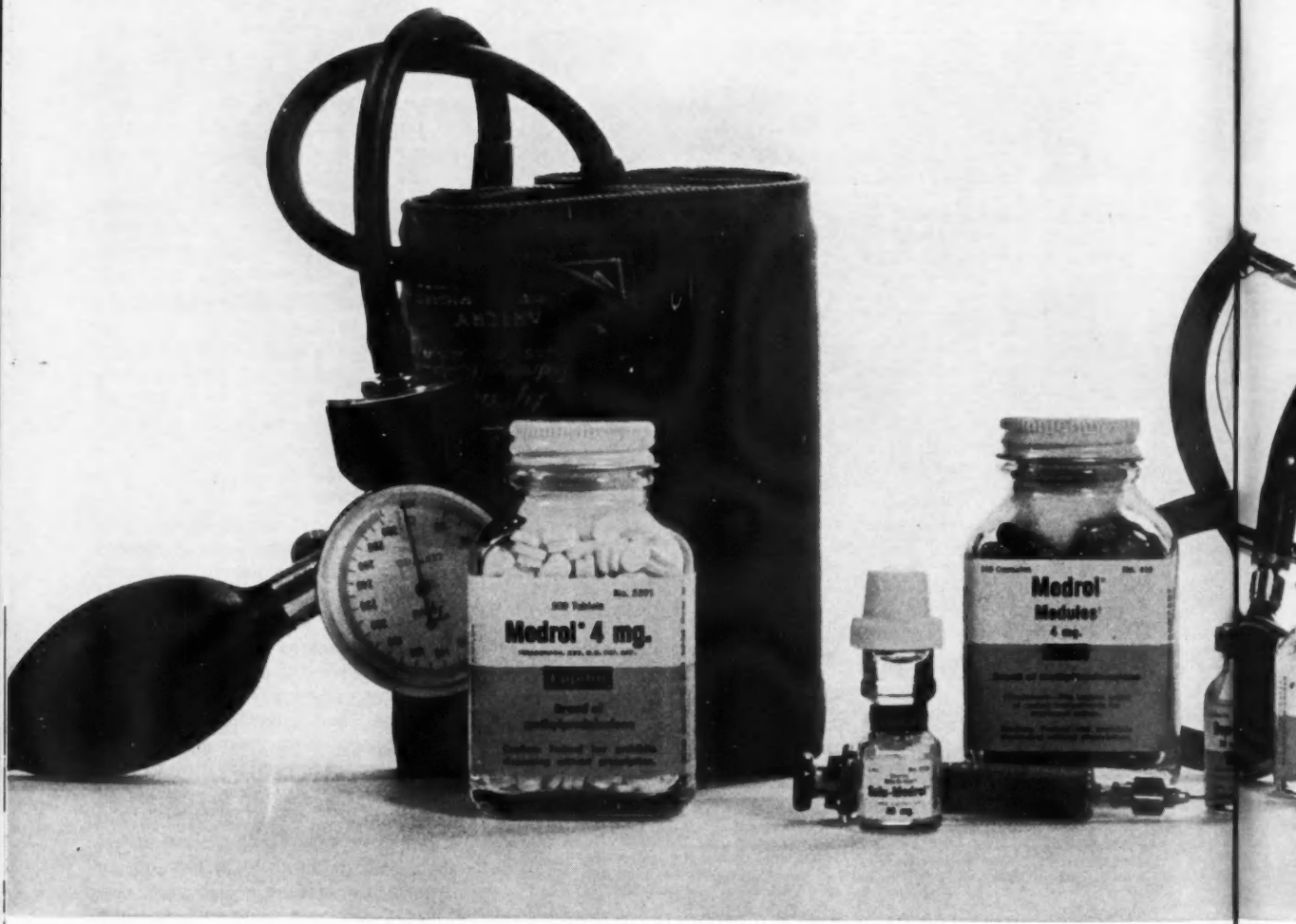
"Around this time she was treated for sinusitis, had much facial pain and her teeth were extracted. The following year, at age 36, the remaining breast was removed and she also underwent an anoplasty for anal stenosis.

Three years later she had two operations on her eyes to correct muscle imbalance. This gives us a total of some 15 operations by the time she was 40 years old.

Diagnosis: Hysteria

"When I saw her in consultation she denied any emotional problems and stated that her problem was one of pain in the chest, back, head and neck. I might add that about age 30 she had been seen on different occasions by two different psychiatrists. One diagnosed her problem as hysteria, the other as psychoneurosis. The referring physician summarized her past history as 'a peculiar form of anemia, possible bleeding tendencies; chest pain; a variety of gastrointestinal complaints, including heartburn; diarrhea, constipation; also complaints of dysuria, dyspareunia, vaginal discharge; neck pain, back pain, swelling of certain parts of her body; low blood pressure, dizziness, chronic fatigue, headache, diplopia; paresthesias of the hands and feet; hemorrhoids; and painful wrists, knees, elbows and ankles.'

"It was my superficial impression," reported Dr. Washburn, "that she had a rather poor ego structure, although her symptoms appeared to be hysterical." ■



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40 mg. in 1 cc. Mix-O-Vial®

MEDROL MEDULES®
4 mg. in bottles of 30, 100 and 500 capsules
2 mg. in bottles of 30 and 100

DEPO-MEDRO
acetate
40 mg./c
in 1 cc. a
5 cc. vials
20 mg./c
in 5 cc. vi

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MEDROL
WITH ORTHOXINE*
TABLETS
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NEO-MEDROL* acetate
0.25% and 1%
in 5- and 20-Gm. tubes

MEDAPRIN* TABLETS
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†Trademark

September, 1961

The Upjohn Company, Kalamazoo, Michigan

Upjohn
75th year

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*J.A.M.A. *169*:41-45 (Jan. 3) 1959.

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Mead Johnson Laboratories

Symbol of service in medicine

EXPERT FORESEES ORGAN THERAPY OUTSIDE BODY

In medical millennium, already on the way, diseased part may be removed, treated, replaced

"Perhaps surgeons are approaching a medical millennium in which deranged and abnormal functions of organs can be corrected *in vitro* and the organ then returned to its rightful host rather than being discarded," surgeon Richard C. Lillehei of the University of Minnesota Medical School, and younger brother of cardiac surgeon C. Walton Lillehei, explained to MEDICAL WORLD NEWS. When the millennium comes, he says, the surgeon will be able to take a cancerous stomach out, hand it to the radiologist for a supralethal dose of several thousand roentgens, then sew the stomach back in place.

Dr. Lillehei and his colleagues, Drs. Jerrold K. Longerbeam and Bernard Goott, have actually done this in dogs. They have removed the stomach by cutting it free at the esophagus and pylorus, clamping off the stumps and the major blood vessels.

Leaving the dog on the operating table, they have then given the isolated stomach a supralethal dose of x-rays, and put the stomach back in place by anastomosing the pylorus, esophagus and blood vessels.

They have kept the stomach outside the dog for two to three hours at normal room temperature. In several experiments, they have managed to keep the isolated stomach viable for five hours by placing it in a plastic bag, which, in turn, was put into a large beaker of saline and salts and refrigerated at 5° C.

When the stomach is warmed and autografted, it functions again. Even the spleen, which turns black from cyanosis during the procedure, returns to its pink color, according to Dr. Lillehei. When the dogs have recovered from the surgery, they are fed normal diets, have good appetites and stools normal in content and consistency. Seen under the fluoroscope, the stomach's motility and emptying appear normal.

Pepsin Secretion Negligible

Not normal, however, is the way the irradiated autografted stomach secretes. The autografts, stimulated by histamine, secrete neither acid nor pepsin within the first six months. Acid secretion begins to come back at nine months and is normal after a year. Pepsin secretion, on the other hand, stays negligible even two years postoperatively.

Dr. Lillehei's stomach autograft and storing technique emphasizes a number of points. First, it indicates that neuron control is not necessary for viability. Large organs such as the stomach have their own nerve plexuses but are also still under hormonal control from the rest of the body.

Second, the profound effect of transplanting on the secretion of the mucosa might be made permanent and suitable for ulcer therapy.

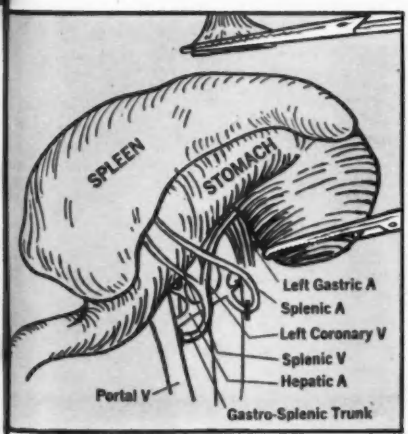
Third, where supralethal radiation doses (1,500 to 2,000 r) are employed for stomach therapy, the rest of the body can be protected. However, where total body irradiation is desired, the sensitive stomach and intestines can be spared.

This last finding is actually Dr. Lillehei's main concern. In 1960 he reported on experiments in which he showed that the best way to transplant the spleen, after total body irradiation, is not in intact form but intravenously after being homogenized, since it takes over blood-forming activities more readily in the latter case.

"I personally think that radiation could be much more effective in treating leukemia, cancer, or any other disseminated disease if it were given in larger doses," Dr. Lillehei believes. Marrow and visceral sensitivity, however, poses the main obstacle.

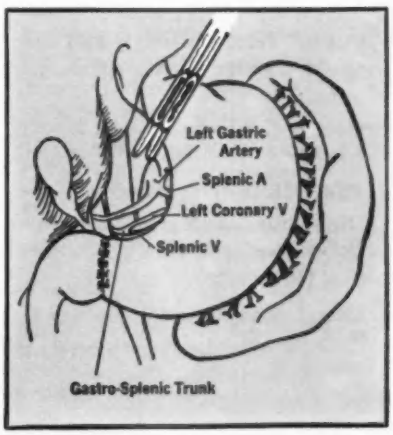
To solve this problem, Dr. Lillehei suggests extracting the patient's marrow and gastrointestinal tract, irradiating the patient, then replacing the marrow by injection and the G.I. tract by surgery.

In the case of whole body irradiation for homotransplants, he would transplant the G.I. tract first, so that it could accept the body into which it was placed. (Such large homografts reject their hosts, rather than vice versa). Once compatibility had been achieved, the body would then accept any homografts from the same donor. ■



DISEASED stomach is removed by cutting it free at esophagus and pylorus.

ISOLATED organ is treated with supralethal x-ray dose, then refrigerated.



REPLACED stomach has normal motility and emptying, but altered secretions.

WITH HYDRODIURIL® IN

HYDROCHLOROTHIAZIDE

EXPERIENCE-N

the abundant experience accumulated with HYD

EFFECTIVE ALONE

"If only one drug were to be used for background therapy, I should prefer a hypotensive diuretic to a rauwolfia alkaloid . . ." "Perhaps the most satisfactory single drug for background therapy at the present time is hydrochlorothiazide, 50 mg. night and morning . . ." "We found that 23 per cent of our patients could be controlled on background therapy alone . . ."

Smirk, F. H.: Am. Heart J. **61**:272, Feb., 1961.

POTENTIATES OTHER THERAPY

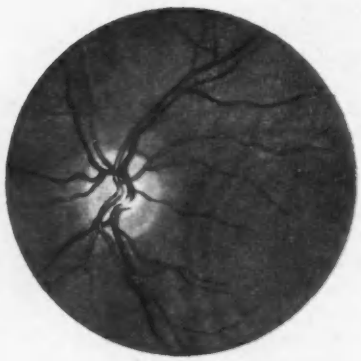
"Thirty-nine hypertensive patients receiving a maintenance dose of reserpine who did not exhibit an adequate hypotensive response were also given 25 to 100 mg. of hydrochlorothiazide daily. Of these, 17 patients had an excellent response; 8 a good response; 2 a slight but inadequate response; and 12 had no response." "Ten hypertensive patients who did not respond to reserpine and hydrochlorothiazide were given 25 to 50 mg. hydralazine daily in addition to the reserpine. Of these, three had an excellent response, five a good response, one a fair response and one no response."

Dupler, D. A., Greenwood, R. J. and Connell, J. T.: J.A.M.A. **174**:123, Sept. 10, 1960.

HIGH PER CENT RESPOND

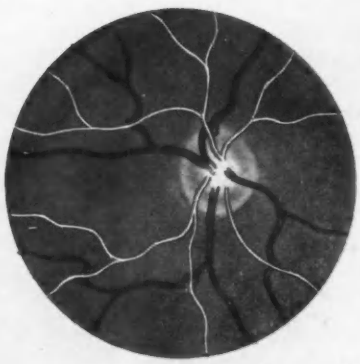
"Hydrochlorothiazide produced a satisfactory lowering of blood pressure in 97 of 116 patients . . ."

Edison, J. N. and Schluger, J.: Am. Heart J. **60**:641, Oct., 1960.



Group I

The funduscopic painting shows a mild narrowing or sclerosis of the retinal arterioles.



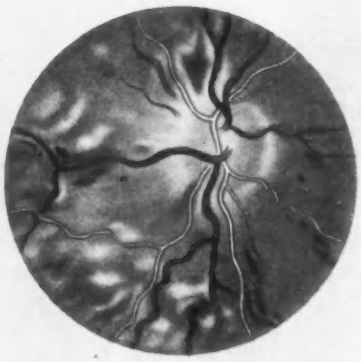
Group II

The funduscopic painting now shows moderate to marked sclerosis of the retinal arterioles with exaggerated light reflex, arteriovenous compression, and irregular narrowing of the arterioles.

IN HYPERTENSION

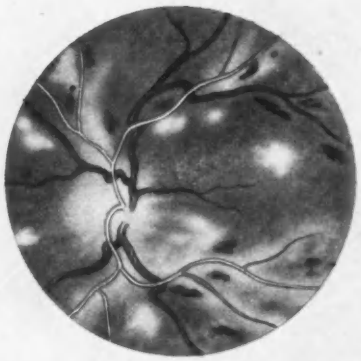
E-NOT EXPERIMENT

with HYDRODIURIL makes experimentation unnecessary



Group III

The funduscopic painting shows the above with exudates, hemorrhages, and retinal edema.



Group IV

The funduscopic painting shows the above with measurable edema of the discs.

CARDIOVASCULAR

NERVOUS SYSTEM

WELL TOLERATED

"Hydrochlorothiazide is a safe drug for use in out-patient treatment. Minimal laboratory control is necessary. Hypopotassemia can usually be avoided if the lowest effective maintenance dose is used and the patient is instructed to include foods in his daily diet which will supply sufficient potassium. Hyponatremia can be avoided by allowance of an adequate intake of sodium in the diet."

Dupler, D. A., Greenwood, R. J. and Connell, J. T.: J.A.M.A. 174:123, Sept. 10, 1960.

DOSAGE: For EDEMA—One or two 50-mg. tablets of HYDRODIURIL once or twice a day. For HYPERTENSION—One 25-mg. tablet to one 50-mg. tablet HYDRODIURIL once or twice a day. However, in some patients as much as 200 mg. daily in divided doses may be necessary.

SUPPLIED: 25-mg. and 50-mg. scored tablets HYDRODIURIL hydrochlorothiazide in bottles of 100 and 1000. Also: brown, sugar-coated tablets HYDRODIURIL-Ka®-25 and white, sugar-coated tablets HYDRODIURIL-Ka®-50 containing respectively 25 and 50 mg. HYDRODIURIL hydrochlorothiazide and, in an enteric-coated core, potassium chloride 572 mg. (equivalent to 300 mg. K). In bottles of 100. Dosage same as for HYDRODIURIL.

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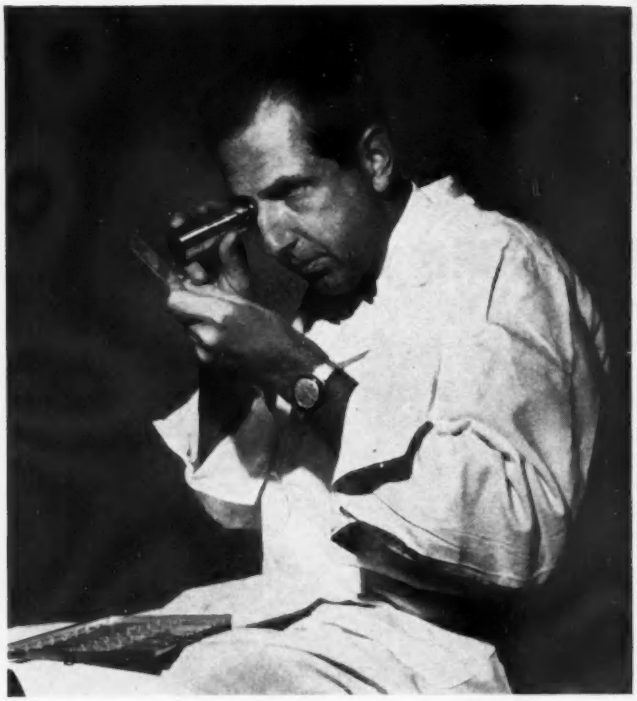
'WONDERFUL WORLD OF CRYSTALS'

Microscope, camera and polarized light open new view of color and shape in crystallized drugs and chemicals

Under a viewer or beneath a microscope, a crystal is a complex of planes, angles and lines. But in the hands of photographer Jack Kath, the most ordinary crystal becomes a many-splendored thing.

One of Kath's assignments as photographic supervisor for Merck Sharp & Dohme, is to provide research scientists with photomicrographs of material they are investigating. Struck by the beauty of some of the structural detail of crystals, he began experimenting. By bathing fixed crystals in polarized light and altering the position of the slide under the microscope, he achieves extraordinary effects.

Reproduced on the following pages are some of the photographs in the Kodak exhibit at New York's Grand Central Terminal — a collection he calls "Wonderful World of Crystals."■



PHOTOGRAPHER Kath views fresh-grown crystals with magnifier.

MICROSCOPE with camera magnifies 120-600 times.

EKTACOLOR prints of Merck products are made for New York exhibit.

See pages 52-53 for Kath's 'Wonderful World of Crystals'

in severe, persistent headache...

new **Sinutab** with **Codeine***

breaks the pain-tension-pain cycle of sinusitis and rhinitis

New companion to dependable Sinutab—but with augmented analgesic action—Sinutab with Codeine controls the pain-tension-pain cycle in severe, persistent frontal headaches and facial pain. Like Sinutab, Sinutab with Codeine effectively decongests mucosa, relieves periorbital pressure and helps the patient relax.

FORMULA: Codeine phosphate 15 mg., acetaminophen 150 mg., acetophenetidin 150 mg., phenylpropanolamine HCl 25 mg., and phenyltoloxamine citrate 22 mg.

DOSAGE: 2 tablets initially, followed by 1 or 2 tablets every 4 hours.

PRECAUTIONS: Sinutab with Codeine should be used with caution in the presence of hypertension, hyperthyroidism and diabetes. Codeine phosphate may be habit forming; phenyltoloxamine citrate may cause drowsiness.

*Subject to Federal Narcotics Regulations.

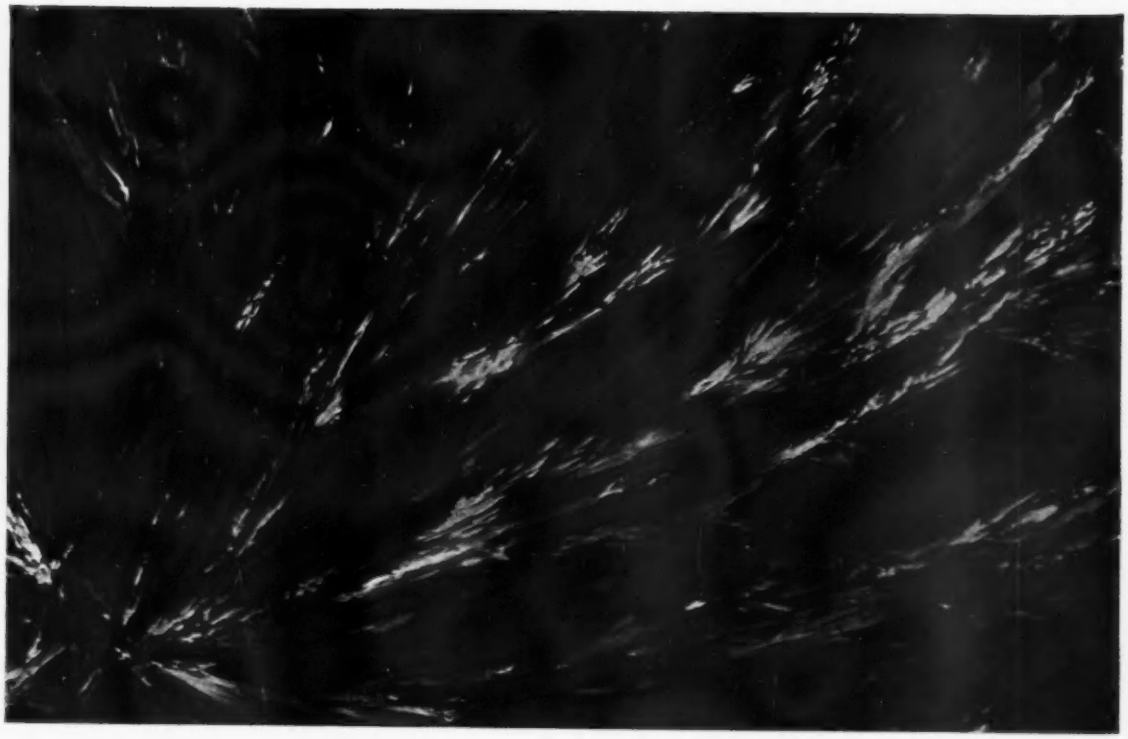
WARNER CHILCOTT

AUTUMN LEAVES—Pyridoxamine dihydrochloride

EBB TIDE—Monosodium glutamate

CROWN JEWELS–
Hydrochlorothiazide

PEACOCK–
Dihydrovitamin K_1 diacetate



RADIATION DAMAGE COOLED DOWN

With two-minute refrigeration, Chicago physicians boost x-ray dose, reduce skin burns

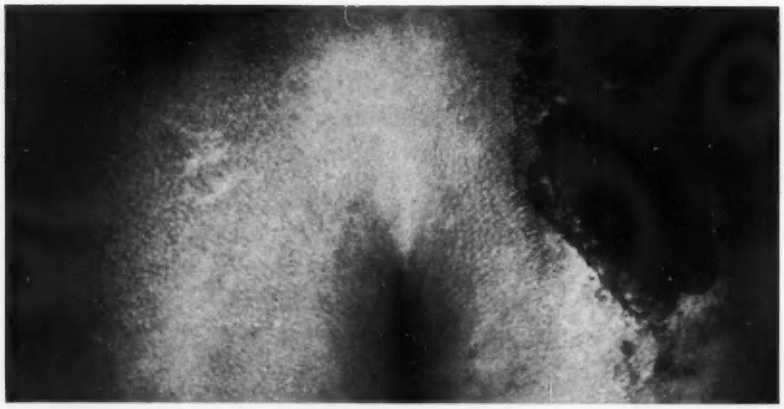
Increased radiation dosage and decreased skin damage during long-term radiation therapy are being made possible by a new method of cooling the skin, four Chicago radiobiologists report. In addition, the technique shows evidence of reducing the ill effects of drugs which heighten skin reaction among patients under radiation therapy.

A specially designed cone and refrigeration unit are used to lower skin temperature in the treatment region, explain Drs. Edwin J. Liebner, Walter S. Moos, Martin Hochhauser and Roger A. Harvey of the University of Illinois College of Medicine. Use of the technique in 31 women treated with standard voltage x-rays for cervical cancer has produced "substantial evidence that the skin at 50-55° F is spared from the usual degree of changes one is accustomed to at adequate radiation doses."

In their series, the team circulated cool water over the skin of the lower right abdomen and left buttock of the women. The left abdomen and right buttock were irradiated but untreated by cooling, to serve as controls.

They found it was necessary to cool the skin for only two minutes to lower the skin temperature to 50-55° F, immediately after which radiation therapy was given for five to six minutes. Treatments were given five times a week for an average of five weeks, they reported.

In 18 of the women, there were striking differences between the two sides—the cooled area showing far less "erythema, desquamation and atrophic changes." An additional ten patients showed less dramatic changes, but had "mild objective evidence of benefit."



COOLED left buttock of cervical cancer patient is burn-free after two-month therapy.

SPECIALLY designed cone and refrigeration unit reduce temperature of skin to 55°.

Highest X-ray Doses Possible

Almost all of the women experienced far less pain and discomfort in the cooled area than in the untreated one, the researchers note. Their study also indicated that radiation dosage levels could be increased by 1,200 to 2,000 rads without damage, thereby allowing an increase of more than ten per cent in depth dose.

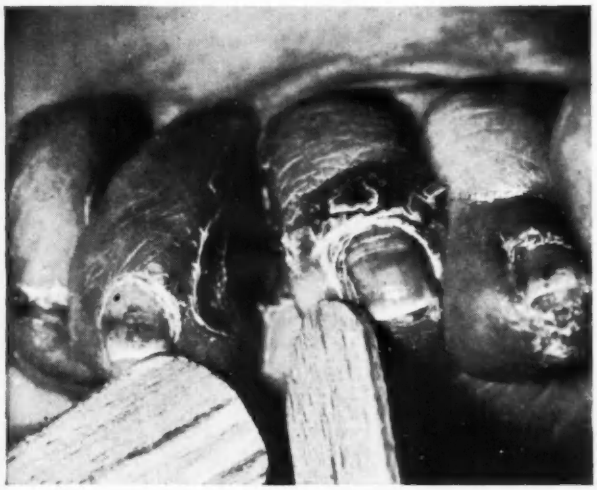
The researchers cite several potentially important benefits of the new technique:

- Skin reactions caused by drugs used in combination with radiation therapy are reduced. ("Future drug developments may make this mode of treatment with refrigeration even more important.")
- More prolonged treatment is made possible with lessened subsequent skin damage.
- Treatment of soft tissue tumors is more effective.
- In young patients on prolonged therapy, potential delayed skin changes are reduced.

They noted that to reduce skin damage more substantially, methods might be developed to cool an area up to twice the size of the actual irradiation area.

"When one considers that the results were obtained at a skin temperature of 50-55° F, and only routine care in applying the cone was given," they pointed out, "certainly more strikingly consistent results should be obtained at a slightly lower temperature with better applicability of the cooling source to the area of the skin." ■

Now... Squibb develops a specific antifungal lotion to combat monilial skin infections



Simple, specific treatment of cutaneous and mucocutaneous monilial infections is now possible with new Fungizone Lotion. Its active component, Amphotericin B, an original Squibb product, exhibits greater *in vitro* activity against *C. albicans* than Nystatin.[1] Now, for the first time, specific antibiotic therapy for cutaneous moniliasis can be prescribed in *lotion* form, known to be of particular value in the treatment of moist, intertriginous lesions.

In practice, Fungizone Lotion has proved highly effective in the usual monilial infections including even some recalcitrant paronychias. No systemic side effects have been encountered and local irritation was extremely uncommon.[2]

Supply: 30 cc. plastic squeeze bottle.

References: (1) Stough, A. R.; Groel, J. T., and Kroeger, W. H.: Antibiotic Med. & Clin. Ther. 6:653 (Nov.) 1959. (2) Clinical Reports to The Squibb Institute for Medical Research.

For full information, see Squibb Product Brief.

NEW Fungizone Lotion

Squibb Amphotericin B

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BRAIN YIELD

Bold, sophisticated methods of diagnosis and therapy highlight International Congress

The human brain, probably the greatest of all medical challenges, is yielding grudgingly to the great research effort being pressed by scientists around the world. This was evident at the Second International Congress of Neurological Surgery in Washington.

While there were no major pronouncements, there was the clear indication that neurosurgery is becoming much more sophisticated, through precision techniques; much more bold, with surgeons now reaching for deep tumors and repairing some aneurysms; and it is being stimulated by major strides in basic instrumentation and research.

Problems of hypothermia — One of the current debates is whether deep tumors and aneurysms can be best attacked by whole body or regional brain hypothermia. The major drawback to whole body hypothermia is the stress it places on the entire cardiovascular system, threatening fibrillation and heart failure. This requires the constant attendance of experienced cardiologists as well as neurosurgeons. The problem with regional hypothermia has been the inability of surgeons to make the cooling completely effective. This severely limits operative time.

Dr. John E. Adams and his group at the University of California School of Medicine reported that the source of the difficulty lies with the anterior spinal artery.

In a series of experiments on goats, Dr. Adams found that even though the temperature of the brain is selectively pulled down to 4° and 6° C—while the rest of the body is kept at 28° to 35° C—the brain stem is warmed by the anterior spinal artery. And, as it warms, its metabolic demands increase so that neurologic damage results quickly if normal blood circulation is not restored to the brain as a whole.

There is no present way, he said, to subject the anterior artery blood supply to extracorporeal cooling, as in the case of the carotids; or to occlude it, as in the case of the innominate, carotid and subclavian.

NEW SURGICAL KNOWLEDGE

This finding, according to the California neurosurgeon, means that it is crucial to monitor brain stem temperature (he uses a cerebellar thermistor) during hypothermic surgery, to determine how long it is safe to continue the operation. On the basis of his experiments, and a limited clinical trial, Dr. Adams says it appears that the surgeon has about 30 minutes to operate during deep hypothermia.

The clinical trial involved five patients: two with glioblastomas, one with metastatic sarcoma, one metastatic carcinoma and one angioma. All but the angioma patient, who died because of technical difficulties, were classed as "temporary successes." As a result, Dr. Adams considers regional hypothermia the treatment of choice in suitable aneurysms and difficult tumors—but not in cases with angiomas.

Proton beam therapy—A new development, described to the Congress, involves concentrating proton radiation on the target without unduly damaging adjacent normal tissues and structures. Drs. Raymond N. Kjellberg and William M. Preston of the Massachusetts General Hospital, reported that the energy released at the "Bragg peak," the end of a 159 mev synchrocyclotron beam of protons, is 1.5 to two times greater than that discharged along its path. With a stereotactic system, they aimed the Bragg peak at a deep-seated tumor just above the pituitary of one patient, a young girl. The technique resulted in preliminary, yet significant, tumor reduction.

Sweden's Dr. Lars Leksell reported another use of proton beams in two cases of Parkinsonism and a single case of chronic depression and disabling pain treated by proton beam thalamotomy. Except for a slight weakness in the leg of one Parkinsonism case, Dr. Leksell considered the results good, although he cautioned that they are still tentative.

Microscopic surgery—One of the many discouraging areas in neurosurgery has been the attempt to extend the advances in vascular repair to the arteries of the brain. Surgery to clear stenosed carotids has been successful, but most efforts to attack the mid-cerebral artery have ended in failure, generally because the vessels rethrombosed. Now a team at the University of Vermont is making a new attack on the problem — using microsurgical techniques (MWN, Nov. 4, 1960).

Dr. R. M. Peardon Donaghy, who works with Dr. Julius H. Jacobson, a vascular surgeon, reported that he and his colleagues have developed their microsurgical technique and microsuturing to the point that they can successfully repair animal vessels of only 2.5 mm. They have also attempted the emergency repair of mid-cerebral arteries in two patients.

One, suffering from total hemiplegia and aphasia, was operated on four days following mid-cerebral occlusion. Although considered far too late for effective treatment, the artery remained patent for 20 days before it reclosed at the site of suture. Another patient, suffering from total hemiplegia, was operated on only six hours after embolism; his artery remained patent for 16 days.

Dr. Donaghy concluded that al-

CONTINUED ON PAGE 60

Renese®
POLYTHIAZIDE
a more clinically useful diuretic/antihypertensive

IN BRIEF

RENESE (polythiazide) is a new, highly potent, orally effective, nonmercurial diuretic, saluretic, and antihypertensive agent with a high therapeutic index, low order of toxicity, and an intrinsically prolonged duration of action which enhances the excretion of sodium and chloride by the renal tubules.

INDICATIONS: RENESE is indicated for the treatment of hypertension and edema. It has been found useful in congestive heart failure, fluid retention of pregnancy, premenstrual tension, obesity (where fluid retention is present), renal edema, cirrhosis, drug-induced edema, and toxemia of pregnancy.

ADMINISTRATION AND DOSAGE: *Initial dose:* Depending on the severity of the conditions, initial doses of RENESE may range from 1 mg. to 4 mg. daily (refractory cases may require as much as 12 mg. daily). *Maintenance dose:* Usual effective maintenance doses range from 1 mg. to 4 mg. daily, depending on the severity of the cases. Some patients have responded to 1 mg. every other day (0.5 mg. daily).

SIDE EFFECTS AND PRECAUTIONS: Since all diuretic agents may reduce serum levels of sodium, chloride, and potassium, patients on RENESE should be observed regularly for early signs of fluid or electrolyte imbalance. Caution must be exercised during digitalis administration to prevent hypokalemia since patients are then more sensitive to the development of digitalis toxicity. During RENESE therapy of edema in patients with chronic renal disease, routine precautions should be taken against renal failure as indicated by an increasing blood urea nitrogen. Like other thiazide diuretics, RENESE may cause a rise in serum uric acid levels and should therefore be used with caution in patients with gout. Should overt manifestations of gout appear, the concomitant use of uricosuric agents may be effective in relieving the symptoms. Side effects with RENESE, such as nausea, vertigo, weakness, and fatigue are infrequent and seldom require cessation of therapy. Most of these reactions may be overcome by reducing the dose of RENESE or by taking measures to improve any electrolyte imbalance. Mild maculopapular skin rash has been rarely reported. Extra precautions may be necessary in patients who may require norepinephrine, or curare or its derivatives.

SUPPLIED: RENESE is available as 1 mg., white, scored tablets in bottles of 30; 2 mg., yellow, scored tablets in bottles of 30; 4 mg., white, scored tablets in bottles of 30.

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new Renese®

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1 mg. 2 mg. 4 mg.

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DIURETIC/ANTIHYPERTENSIVE

active antihypertensive
broad benefit
clinically confirmed
convenient control
dosage dexterity
dependable diuresis
enhanced effectiveness
foremost flexibility
increased individualization
long lasting
marked micturition
notable natruresis
orally optimal
peak potency
prolonged performance
reliable response
significant saluresis
tested toleration
unsurpassed utility
valuable versatility

"enhanced effectiveness"

– In a 24-hour dose response study, RENESE produced a greater increase in sodium excretion than has been shown with four other currently available thiazides. In a controlled study[1] of patients with hypertensive cardiovascular disease, free of detectable edema, the 24-hour urinary volume increased by an average of 1.8 liters with an accompanying average weight reduction of 1.4 Kg. following a single 8 mg. dose of RENESE. The enhanced effectiveness of RENESE may produce response where previous therapy has failed or improve the response to present therapy.

1. Ford, R. V.: Current Therap. Res. 3:320, July, 1961.

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PFIZER LABORATORIES Division,
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BRAIN YIELDS CONTINUED

though the suturing could be done with relative ease under a microscope, the sutures are too large, and reduce the intima and promote clotting. Extremely fine sutures are now being developed to eliminate the problem. Dr. Donaghy is also investigating the possibility of enlarging the vessel at the anastomosis site with a patch. In time, he is confident, successful mid-cerebral artery repair will be possible.

Electrical diagnosis—Dr. Fritz L. Jenkner of the Surgical University Clinic in Graz, Austria, has developed an electrical method—he calls it rheoencephalography—which he reported is extremely effective in distinguishing hemorrhages from occlusions. The technique involves placing frontal and mastoidal scalp electrodes in such a way as to register changes in conductivity caused by alterations in cerebral circulation.

In 140 cases of cerebral compression, Dr. Jenkner said, the method led to only one wrong diagnosis. London's noted neurosurgeon Wylie McKissock presented Dr. Jenkner with 54 cases without revealing the diagnoses. In each case, Dr. Jenkner confirmed Dr. McKissock's findings.

Basic research—Dr. Sarah Luse of the Washington University School of Medicine reported discovering unusual histological characteristics in two different kinds of brain tumors. In oligodendrogliomas, she found large numbers of extraordinarily large mitochondria. In Schwann cells, or 8th nerve tumors, she identified strangely wide spacings in collagen cross striations—1,800 to 2,000 Angstroms instead of the usual 640. Both phenomena point strongly to the possibility of an enzymatic defect in the tumors, Dr. Luse said.

In another study at Washington University, Drs. A. Basil Harris and his group are pursuing the finding that heat destroys tumor cells more readily than normal cells. One important question, in the case of the brain, is whether the hypersensitive tissue could tolerate heat.

Tests showed that below 44° C, the dogs "exhibited no neurological abnormalities or other sequelae" even on histological examination. But above 44° C, the animals died within 24 hours and post mortems showed edema, hyperemia and spotty infarction of the brain. ■

SCHIZOPHRENIC FACTOR JAMS GLUCOSE REACTION

Detroit investigators find that patients metabolize energy 'as though their gears were stuck'

This year, three separate laboratories reported isolation of the elusive blood substance which some psychiatrists have postulated as an underlying factor in schizophrenia (MWN, Jan. 6).

One of these groups has now gone even further: they have found evidence of how the factor works. Drs. Charles E. Frohman and Jacques S. Gottlieb of the Lafayette Clinic, Detroit, report that the substance found in schizophrenic, but not normal, plasma alters the patient's carbohydrate metabolism. Under stress, he cannot rapidly convert glucose into energy. The schizophrenic, they theorize, retreats from reality because he does not have energy to cope with it.

One of the body's basic mechanisms for adapting to stress, they point out, is the shunting of glucose into one of two pathways. Depending on energy needs, glucose is either stored (as glycogen) or converted into energy to drive such processes as nerve response, hormone synthesis or digestion. In the schizophrenic this switching system is inefficient, Dr. Frohman explains.

Their first clue to the site of the biochemical error, says the Detroit investigator, was the discovery that red blood cells of schizophrenics metabolize glucose abnormally in stressful situations. Unlike cells drawn from normal patients, the schizophrenic cells fail to take up additional phosphate ions, required for the immediate conversion of glucose into energy. Stress induced by insulin injections produces the same effect.

Subsequent studies show that the defect resides not in the cells but in the plasma. Schizophrenic cells in normal plasma handle glucose normally, while normal cells in schizophrenic plasma do not.

The plasma factor that causes the disturbance can be detected by a biotechnique, which has already demonstrated considerable accuracy in distinguishing schizophrenics from normals. A blind study of 18 blood samples carried out at the National Institute of Mental Health picked out the seven normal individuals and six of 11 diagnosed schizophrenics.

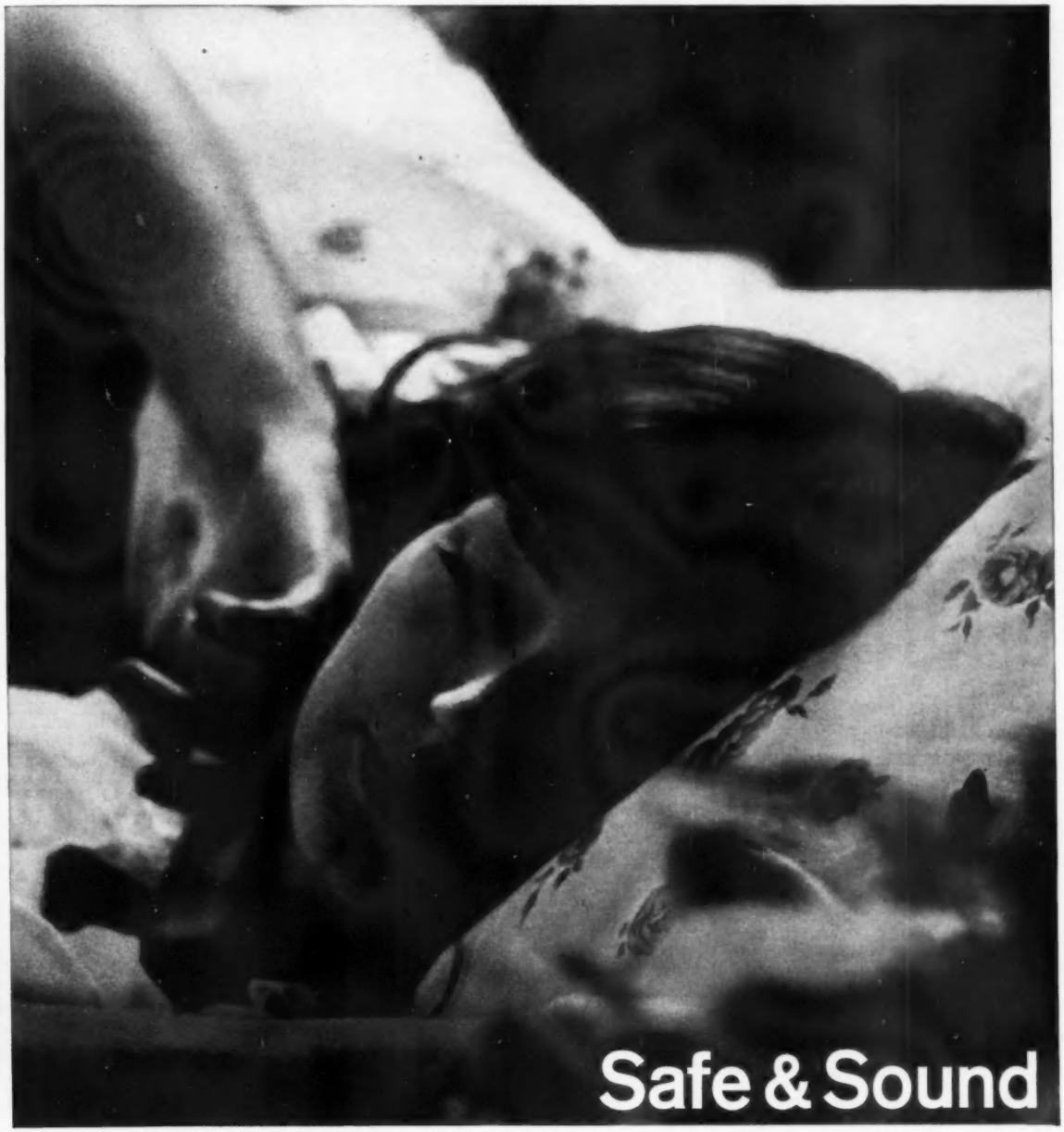
An improved test, Drs. Frohman and Gottlieb believe, could facilitate the often difficult problem of diagnosing the disease.

"First of all," says Dr. Frohman, "the nature of the factor must be elucidated. Right now we don't know whether it is a normal blood constituent present in abnormal amounts or truly an abnormal protein. We do know, however, that it is an alpha globulin."

Discussing how their work fits in with current theories of schizophrenia, Dr. Gottlieb suggests that there are really only three possible explanations: the disease is a genetically caused inborn error in metabolism, a genetic factor released only by environmental stress or an environmentally induced disease.

DRS. C. E. Frohman (l.) and J. S. Gottlieb

"The most intriguing possibility is the latter," he says. "There is a great deal of evidence that the individual who becomes schizophrenic is raised in a socio-psychological environment that is stressful from the time of birth on. Perhaps what we are finding is that this early traumatic environment affects the normal development of stress adaptive mechanisms. If these are stunted or too pressed in the early stages of development their efficiency of operation is limited and, with greater stress, they break down." ■



Sleep is sound, sleep is secure with Doriden. Five years' clinical experience has proved its efficacy and wide margin of safety, has made it the most widely prescribed nonbarbiturate sedative. The clinical safety of Doriden—in terms of minimal side effects,[1,2] absence of respiratory depression,[1-4] and lack of adverse effects on liver,[5] kidney,[1,5] and blood—has been confirmed repeatedly. So, for *all* the benefits of safe and sound sleep—prescribe Doriden.

Now also available

Doriden Capsules

Supplied: *Capsules,* 0.5 Gm. (blue and white). *Tablets,* 0.5 Gm. (white, scored), 0.25 Gm. (white, scored) and 0.125 Gm. (white).

References: 1. Blumberg, N., Everts, E. A., and Goracci, A. F.: Pennsylvania M. J. *59*:808 (July) 1956. 2. Matlin, E.: M. Times *84*:68 (Jan.) 1956. 3. Hodge, J., Sokoloff, M., and Franco, F.: Am. Pract. & Digest Treat. *10*:473 (March) 1959. 4. Burros, H. M., and Borromeo, V. H. J.: J. Urol. *76*:456 (Oct.) 1956. 5. Lane, R. A.: New York J. Med. *55*:2343 (Aug. 15) 1955.

For complete information about Doriden (including dosage, cautions, and side effects), see current Physicians' Desk Reference or write CIBA, Summit, N. J. 2/2005MD

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TESTIMONIAL dinner, bestowed by 1,000 well-wishers, climaxes Dr. Davison's career.

POMP AND CIRCUMSTANCE FOR A RETIRING DEAN

Dr. 'Dave' of Duke gets array of awards ranging from honorary LLD to Lincoln Continental

A medical educator last month was paid a superlative tribute in the style heretofore reserved for movie stars, conquering generals and hard-hitting center fielders.

Honors were heaped on quiet, informal Wilbur Cornell Davison by the fans he had won during the third of a century he was dean of Duke University Medical School. Dr. "Dave"—sitting on the platform next to Doris Duke, daughter of the University's principal benefactor, the late James B. Duke—was feted at a king-size testimonial dinner.

A "Duke Blue" air-conditioned Lincoln Continental was bought for Dr. Davison by alumni and friends.

The student body provided $500 toward a "Davison Scholarship" that would enable a Duke medical student to spend one semester abroad yearly.

University trustees informed "Dave" of a unanimous vote to have the medical school building bear his name and earlier, an honorary Doctor of Laws degree had been bestowed on the much-honored dean.

Almost embarrassed by riches, those in charge of the ceremonies announced that $7,718 more than the price of the automobile had been received. The sum was turned over to Duke Medical Center with the request that it find still another way to honor Dr. Davison.

The gala affair was held in conjunction with a five-day international "Symposium on the Commonwealth of Children," which attracted 20 speakers from five countries. They discussed the future of health, economics, education and other matters concerning children—with which Dr. Davison has been primarily concerned during his professional life.

When called upon to speak at the dinner by thunderous ovation from his audience, Dr. Dave gave one clue to his success—concern with the grass roots of medical practice.

He did not belittle the school's national contributions—"thirteen of our alumni are deans or assistant deans of several medical schools"—but he noted that "our greatest accomplishment has been that 20 per cent of our alumni are in the practice of medicine in North Carolina, and that 25 per cent of their number are in general practice." ■

DR. DAVISON retires after long career.

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she wakes refreshed

morning dose controls blood pressure all day

her food tastes better
(thanks to salt liberalization)

edema relieved
(shopping easier)

"cardiac fears" allayed
(zest for life returns)

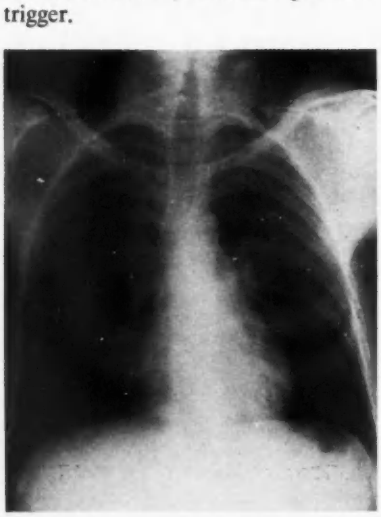
NEW X-RAY LIGHTENS BIG BURDEN

Portable, battery-powered device can be transported for routine or emergency use in town or country

PISTOL-SHAPED x-ray tube works on rechargeable batteries in portable case.

Wherever they practice — in isolated prairie towns or the big cities — physicians may soon be able to obtain an x-ray of a patient at the scene of an accident or disaster.

This has been made possible by development of a portable, battery-powered x-ray device that weighs under 85 pounds. Called *Fexitron,* it can be easily transported by car, ambulance, helicopter, mule or even human back. To take a picture, the operator places the apparatus on the ground, holds the lead-shielded gun-shaped tube in his hand, aims and pulls the trigger.



CHEST SHOT is taken at .001 seconds.

Designed originally for the Army Medical Service, the *Fexitron,* when it becomes generally available, may also be used by physicians in regions without electricity. This may make it especially useful to physicians working in underdeveloped areas of the world, where adequate equipment and power sources are often scarce or nonexistent. Should its rechargeable batteries run down, a standard automobile battery may be substituted.

Replaces 1,000-pound Device

The lightweight device, exhibited at a meeting of the Association of the U. S. Army in Washington, D. C., fills a one-cubic-foot knapsack, and performs the basic functions of a standard field unit that weighs half a ton.

The key feature of the portable unit is an x-ray tube that takes "cold" radiographs.

In a conventional tube, heat must be applied to the source of electrons, and this requires heavy heating equipment. But *Fexitron,* invented by physicist W. P. Dyke, president of the Field Emission Corporation of Oregon, appropriately employs the principle of "field emission," and operates without using heat.

Thus, when a cold metallic strip in the tube is exposed to a high electric field created by battery power, it emits electrons into the surrounding vacuum and thence into the target.

Because of its high current density, the field emission electron source gives a million times more current per unit than conventional heated cathodes.

Exposure time is only .001 seconds, an interval so brief that no blur is seen on the x-ray photo. In the laboratory, for instance, Army developers have produced crisp photographs of the skeleton of a cat that had been thrown into the air. Clear shots of the chest can be taken at a standard distance, despite the patient's breathing or the slight involuntary motions of the operator's hand. This is especially important, says the Army, for patients who cannot hold their breath, such as those who are dazed or unconscious. ■

Where's the arthritic this morning?

Thanks to Medrol Medules, he woke up comfortable and he's already on the go.

The first long-acting oral steroid, Medrol Medules gives the arthritic patient therapeutic action that continues through the night. In many cases, morning stiffness can become a thing of the past.

The slow, steady release of methylprednisolone often provides greater effectiveness, with less frequent administration and sometimes a reduced total daily dosage.

Many of your arthritic patients, too, can wake up comfortable on Medrol Medules.

Dosage: The following dosages are recommended in rheumatoid arthritis:

	Initial	*Maintenance*
Severe	**12 to 16 mg.**	**6 to 12 mg.**
Moderately severe	**8 to 10 mg.**	**4 to 8 mg.**
Moderate	**6 to 8 mg.**	**2 to 6 mg.**
Children	**6 to 10 mg.**	**2 to 8 mg.**

With Medrol Medules, it may be possible to reduce the total daily dose by ⅓.

Indications and effects: Medrol benefits (anti-inflammatory, antiallergic, antirheumatic, antileukemic, antihemolytic) have been demonstrated in acute rheumatic carditis, rheumatoid arthritis, asthma, hay fever and allergic disorders, dermatoses, blood dyscrasias, and ocular inflammatory disease involving the posterior segment.

Precautions and contraindications: Because of Medrol's high therapeutic ratio, patients usually experience dramatic relief without developing such possible steroid side effects as gastrointestinal intolerance, weight gain or weight loss, edema, hypertension, acne, or emotional imbalance.

As in all corticotherapy, however, there are certain cautions to be observed. The presence of diabetes, osteoporosis, chronic psychotic reactions, predisposition to thrombophlebitis, hypertension, congestive heart failure, renal insufficiency, or active tuberculosis necessitates careful control in the use of steroids. Like all corticosteroids, Medrol is contraindicated in patients with arrested tuberculosis, peptic ulcer, acute psychoses, Cushing's syndrome, herpes simplex keratitis, vaccinia, or varicella.

Approximately 135 tiny "doses" mean smoother steroid therapy

Each capsule contains: Medrol (methylprednisolone) 2 mg. or 4 mg. Supplied in bottles of 30 and 100.

Medrol* Medules*

Upjohn 75th year

BLUE SHIELD MAPS UNIFIED POLICY

National headquarters is asking each local plan to accept a Professional Services Index. The aim is to set up standard contract provisions for nationwide Blue Shield subscribers

"It's like trying to make an apple pie out of fruit salad," is the way one Blue Shield executive describes the problem of selling and servicing big accounts with enrollees scattered throughout the country.

His culinary comparison illustrates the current problem of preparing a single insurance package for a nationwide customer out of a potpourri of unrelated local benefit and fee schedules offered by 69 independent Blue Shield plans.

To relieve this jumble, national Blue Shield executives have come up with a new recipe: a Professional Services Index. Completed after more than three years by Blue Shield executives and statisticians, the Index in final form has just been presented to a meeting of local plan directors in Chicago.

In asking for approval, Shield leaders stated that the policy package would provide urgently needed uniformity in benefit coverage and predictability of costs, while allowing individual plans to set their own realistic dollar allowances depending on local fees.

Plans Vary from Place to Place

As things now stand, some plans provide payment in full for services rendered to subscribers earning under $10,000; others to those earning only $4,000 or less. One plan offers in-hospital medical care for 21 days; another for 120 days. One plan may have an allowance of $125 for an appendectomy and $150 for a strabismus; another, $115 for the appendectomy but $165 for a strabismus; while a third plan may not cover strabismus at all.

This makes it impossible for Blue Shield to answer two simple questions a large company wanting national coverage might ask: "I have this much to spend, what can I buy?" or, "This is what I want, how much will it cost?"

The Index, officials believe, can provide the answers. In effect a national relative value study, the Index provides a formula for quickly determining the worth of a procedure in comparison to all others in a similar category. Blue Shield statistically developed the Index from a composite of the "most realistic" Blue Shield fee schedules now in effect and from the medical-society-approved relative value studies throughout the U.S.

How the Proposal Would Work

On this basis of current practice in the country, procedures were given relative values in three-decimal numbers and units. (The list for surgery alone covers 1,623 procedures.) Appendectomy was used as a base in the surgery-obstetrics category with the value of 1.000, or 36 units. A similar procedure was followed in other service categories: medical, radiotherapy, diagnostic x-ray and pathological services.

Local plans have now been asked to assign a dollar value to the unit in each service category, according to John Castellucci, executive vice president of national Blue Shield.

In addition, the local service plans are being asked to assign dollar-to-unit values for three income-level contracts — $2,500 single/$4,000 family; $4,000 single/$6,000 family; and $5,000 single/$7,500 family.

Once these unit values have been set, national Blue Shield can then estimate the cost of any procedure in the local areas where a national account subscriber might reside, depending on the contract purchased.

Subscribers' Incomes the Factor

For example, a plan might assign $3 per surgical unit for the low-income contract; $4 for the middle and $4.75 for the top income contract. The surgeon's fee for an appendectomy, at 36 units, would then be $108, $144 or $171 depending on the income of the subscriber and the contract purchased.

And the corresponding fee for a tonsillectomy (12 units) would be $36 on the low contract, $48 on the middle-income contract and $57 for the high-income contract.

With the Index, local plans have also been requested to approve a participating agreement, guaranteeing that they will provide the listed benefits for national accounts according to the fees developed from the Index.

Thereby, plans must provide the same number of days of in-hospital care, the same lab and x-ray services.

Mr. Castellucci added that of the 69 Blue Shield plans, 14 are indemnity—they pay cash benefits according to schedule and do not guarantee service paid in full regardless of income. These, he said, will be asked to underwrite the same pattern of benefits at a unit value which might be an average of what service plans agree to.

Blue Shield leaders stressed that the Index was applicable solely to national accounts, but many noted that it would undoubtedly have a strong effect on local operations. And comments from the field bear this out.

Milwaukee the First to Sign

Dr. W. H. Horton, executive director of Connecticut's Blue Shield plan and chairman of the Committee on Professional Service which developed the Index, said: "It will be of great assistance to me when I make changes in my schedule to know that this is the pattern in which services all over the country are being paid."

Another plan director explained: "There will have to be some alteration in our local allowances; we can't pay more for a procedure under a national plan than a local plan."

Despite the objections this nationally inspired uniformity may meet at the local level, Blue Shield executives urged "prompt action" in signing the policy package. Opinions varied considerably—from "a month or two" to "quite a few months"—when it came to an estimation of "prompt."

Thus far, the Blue Shield plan in Milwaukee is the first and only one to put it into effect on the basis of a pilot Index distributed this summer. Six others have reported progress in going ahead. But almost all plans must have the approval of their boards of directors and local medical societies before signing the agreement." ■

NATIONAL BLUE SHIELD'S UNIT VALUE SCALE

The new Blue Shield Professional Services Index gives unit—rather than dollar — value to medical procedures. Categories of services have been set up to cover medical, surgery-obstetrics-anesthesia, diagnostic x-ray, radiotherapy and pathological services.

Within each category, one procedure is selected as base. In the surgery section, for example, the base procedure is an appendectomy, which is given a value of 1.000 or 36 units. All other surgical procedures are assigned relative unit values.

On the basis of usual local fees charged, individual Blue Shield plans in the U.S. are being asked to set a dollar value per unit. A partial list of procedures is shown below.

SURGERY AND ANESTHESIA

Unit values cover the procedure plus customary pre- and postoperative care. In multiple procedures performed through the same incision, payment will be made for the major procedure; in separate incisions an additional 50 per cent of the minor fee will be paid.

	Units assigned SURGERY	ANESTHESIA
INTEGUMENTARY SYSTEM		
Drainage of infected steatoma	2	—
Drainage of furuncle	3	—
Drainage of small subcutaneous abscess	3	—
Drainage of pilonidal cyst	7	—
Incision and removal of foreign body	3	—
Excision of pilonidal cyst or sinus	26	5
Radical mastectomy, including breast, pectoral muscles and axillary lymph nodes, unilateral	59	12
bilateral	83	16
MUSCULOSKELETAL SYSTEM		
Aspiration biopsy of bone marrow, including sternal puncture	4	3
Fractures:		
Nasal, simple, closed reduction	7	3
Vertebral body, one, without open reduction	35	7
Clavicle, simple, closed reduction, without manipulation	12	—
compound	21	4
simple or compound, open reduction	27	5
simple, closed reduction with manipulation	12	3
Ribs, one, simple, strapping	4.5	—
more than one, simple strapping	6	—
Radius and ulna, simple, closed reduction without displacement	17	—
with displacement	26	5
compound	41	8
simple or compound, open reduction	47	9
Knee (distal end of femur, proximal end of tibia, proximal end of fibula) one or more bones, simple, closed reduction	26	5
Tibia and fibula—shafts, simple closed reduction	27	5
compound	43	9
Shoulder (humerus) simple, closed reduction	12	3
compound	20	4
simple or compound, open reduction	44	9
Tenorrhaphy: suture of divided or ruptured tendon—extensor, one tendon, primary suture	15	3
RESPIRATORY SYSTEM		
Excision of nasal polyps, single or multiple, one or more stages—unilateral	7	3
Control of primary nasal hemorrhage, with cauterization of septum	3	3
Ethmoidectomy, intranasal, bilateral	28	6
Tracheotomy (independent procedure)	22	4.5
Bronchoscopy, diagnostic	14	3
CARDIOVASCULAR SYSTEM		
Catheterization of heart (independent procedure)	18	3.6
Arteriography (exclusive of x-ray allowance)	10	3
lumbar	10	3
Blood transfusion, replacement type Rh factor	27	5
DIGESTIVE SYSTEM		
Excision of parotid tumor	36	7
Tonsillectomy, with or without adenoidectomy, under age 12	14	3
age 12 or over	15	3
Adenoidectomy (independent procedure)	9	3
Esophagoscopy, diagnostic	14	3
Subtotal gastrectomy	71	14
Gastroscopy, diagnostic	13	3
Colectomy with resection of part of colon with anastomosis, one stage.	83	17
Appendectomy (independent procedure)	36	7
Proctoscopy, with removal of papillomas or polyps, initial	8	3
Hemorrhoidectomy, internal	25	5
external only	6	3
internal plus external	26	5
URINARY SYSTEM		
Cystoscopy, diagnastic initial	6	3
with biopsy, initial	9	3
with fulguration of bladder tumor, initial	18	3.6
MALE GENITAL SYSTEM		
Circumcision, newborn	3	3
Prostatectomy, perineal, subtotal	61	12
suprapubic, one or two stages	61	12
Transurethral drainage of prostate (abscess)	20	4
FEMALE GENITAL SYSTEM		
Excision of ovarian cyst, unilateral or bilateral (I.P.)	36	7
Panhysterectomy: total hysterectomy (corpus and cervix)	58	12
Dilation and curettage of uterus (I.P.)	12	3
for removal of uterine polyps	12	3
for all other causes including diagnosis	12	3
MATERNITY		
Obsterical care (delivery)	Flat Rate	
Classic cesarean section	44	9
Cesarean section and hysterectomy (Porro)	58	12
Dilation and curettage of uterus for postpartum bleeding	12	3
ENDOCRINE SYSTEM		
Thyroidectomy, total or complete	58	12
Thyroidectomy, subtotal or partial	52	10
NERVOUS SYSTEM		
Encephalography (I.P.)	12	3
Myelography (I.P.)	10	3
Sympathectomy—lumbar, unilateral	44	9
EYE		
Removal of foreign body embedded in cornea	3	3
Blepharectomy: meibomiam glands (chalazion), single	5	3
multiple	6	3
EAR		
Myringotomy: tympanotomy: plicotomy, unilateral	3	3
Mastoidectomy, simple, unilateral	40	8
radical, unilateral	61	12

MEDICAL SERVICES

In-hospital medical care is covered if rendered to a registered bed patient for other than surgical or obstetrical care, or for separate or exceptional medical problems not connected with postpartum or postoperative care, rendered by another physician to surgical or obstetrical patients.

DAY OF HOSPITALIZATION	UNITS
1st	2.5
2nd	1.5
3rd through 5th	1.25
6th through 365th day (each day)	1

Additional in-hospital medical allowances are made for intensive care of cases of a critical or unusual nature requiring prolonged or repeated attendance.

DIAGNOSTIC X-RAY

	UNITS
Encephalography	7
Skull, complete study	5
Chest—single, PA, teleroentgenogram or other	2
Wrist	2
Upper gastrointestinal tract	7
Colon by barium enema	5
Gallbladder, cholecystography	4

RADIOTHERAPY

	UNITS
X-ray and radium therapy per treatment, by type of treatment	
Superficial (soft-x-ray)	2
Deep x-ray (orthovoltage)	2
Supervoltage x-ray (cobalt, betatron)	3
Consultation, calculation of dosage, preparation and supply of radioelement	6.5
Maximums per condition	
Neoplasms of skin or lip	18
Non-neoplastic conditions	12
Isotope therapy (radioactive drug not included) maximums per year	
Hyperthyroidism	24
Thyroid cancer	50
Polycythemia vera, chronic leukemia, metastatic carcinoma of bone, etc.	30

PATHOLOGICAL SERVICES

	UNITS
Electrocardiogram, with interpretation and report	3
Blood, complete count	1
Cholesterol	1
Non-protein nitrogen	1
Sedimentation rate	0.6
Feces, routine chemical and microscopic examination including parasites	2
Gastric content, sterile technique	1
Sputum, smear, direct	0.6
Consultation requiring limited examination of a given system, but not requiring complete diagnostic history and examination	3
Consultation requiring complete diagnostic history and examination	5.75

...*unfettered*

From the beginning, woman has been a vassal to the temporal demands—and frequently the aberrations—of the cyclic mechanism of her reproductive system. Now, to a degree heretofore unknown, she is permitted normalization, enhancement, or suspension of cyclic function and procreative potential. This new physiologic control is symbolized in an illustration borrowed from ancient Greek mythology—Andromeda freed from her chains.

the first comprehensive regulator of female cyclic function

ENOVID®

(brand of norethynodrel with ethynylestradiol 3-methyl ether)

THE BASIC ACTION

ENOVID closely mimics the balanced progestational-estrogenic action of the functioning corpus luteum. This action is readily understood by a simple comparison. In effect, ENOVID *induces a physiologic state which simulates early pregnancy—except that there is no placenta or fetus.* Thus, as in pregnancy, the production or release of pituitary gonadotropin is inhibited and ovulation suspended; a pseudodecidual endometrium ("pseudo" because neither placenta nor fetus is present) is induced and maintained.

Further, during ENOVID therapy, certain symptoms typical of normal pregnancy may be noted in some patients, such as nausea—which is usually mild and disappears spontaneously within a few days—breast engorgement, some degree of fluid retention, and often a marked sense of well-being. There is no androgenicity. ENOVID *is as safe as the normal state of pregnancy.*

THE BASIC APPLICATIONS

1. Correction of menstrual dysfunction. *Emergency* treatment of severe dysfunctional uterine bleeding is promptly effective following the administration of ENOVID in larger doses. *Cyclic* therapy with ENOVID controls less severe dysfunctional uterine bleeding. In amenorrhea *cyclic* therapy with ENOVID establishes a pseudodecidual endometrium providing the patient has endometrial tissue capable of response.

2. Ovulation suppression (to suspend fertility). For this purpose ENOVID is administered *cyclically,* beginning on day 5 through day 24 (20 daily doses). The ovary remains in a state of physiologic rest and there is no impairment of subsequent fertility. When ENOVID is prescribed for this *cyclic* use over prolonged periods, a total of twenty-four months should not be exceeded until continuing studies indicate that its present lack of undesired actions continues for even longer intervals. Such studies are now in their seventh year and will regularly be reviewed for extension of the present recommendation.

3. Adjustment of the menses for reasons of health (impending hospitalization for surgery, during treatment of Bartholin's gland cysts, acute urethritis, rectal abscess, trichomonal or monilial vaginitis), or other special circumstances considered valid in the opinion of the physician. For this purpose ENOVID may be started at any time in the cycle up to one week before expected menstruation. Upon discontinuation, normal cyclic bleeding occurs in three to five days.

4. Endometriosis. *Continuous* therapy with ENOVID corrects endometriosis by producing a pseudodecidual reaction with subsequent absorption of aberrant endometrial tissue.

5. Threatened and habitual abortion. ENOVID should be used as *emergency* treatment in *threatened abortion* although symptoms may occur too late to be reversible. *Continuous* therapy with ENOVID in *habitual abortion* is based on the physiology of pregnancy. ENOVID provides balanced hormone support of the endometrium, permitting continuation of pregnancy when endogenous support is otherwise inadequate.

6. Endocrine infertility. ENOVID has been used successfully in *cyclic* therapy of endocrine infertility, promoting subsequent pregnancy through a probable "rebound" phenomenon.

THE BASIC DOSAGE

Basic dosage of ENOVID is 5 mg. daily in *cyclic* therapy, beginning on day 5 through day 24 (20 daily doses). Higher doses may be used with complete safety to prevent or control occasional "spotting" or breakthrough bleeding during ENOVID therapy, or for rapid effect in the *emergency* treatment of dysfunctional uterine bleeding and threatened abortion.

ENOVID is available in tablets of 5 mg. and 10 mg. Literature and references, covering more than six years of intensive clinical study, available on request.

SEARLE *Research in the Service of Medicine*

ALLERGISTS QUESTION ONE-SHOT THERAPY

More studies are needed, they say, after hearing conflicting reports on emulsion injections

A smoldering controversy over the effectiveness of desensitization therapy for hay fever sufferers erupted into open conflict during the 4th International Congress of Allergology held in New York City.

The dispute was touched off by the report of Dr. Ethan Allan Brown of Boston that single injections of emulsified pollen extract were almost 100 per cent effective and caused no severe systemic reactions.

Members of a panel discussing desensitization therapy disagreed. Unable to duplicate Dr. Brown's unqualified results, they insisted that there is not enough evidence of the effectiveness of emulsion therapy to warrant his enthusiasm. "This method of treatment is still in the trial stages," declared Dr. Samuel Feinberg, director of the allergy unit at Northwestern University Medical School. "Carefully controlled studies are still required."

Dr. Feinberg reported that he had tried emulsified extracts and got results strikingly different from Dr. Brown's. In three successive ragweed seasons with the criterion of 50 per cent or greater relief as a measure of success, he obtained a good response in 66, 67 and 71 per cent of his patients.

Dr. C. E. Arbesman, of the University of Buffalo School of Medicine, added that when he treated his patients with Dr. Brown's emulsion, therapy was anywhere from 50 to 85 per cent effective—almost as good as conventional aqueous extracts. Dr. Arbesman cautioned, however, that many patients developed nodules and swelling at the site of injection.

Dr. Mary Loveless, professor of clinical medicine at Cornell University Medical College, who originally developed emulsion therapy 15 years ago, hastened to defend the technique with the statement that "it is just as effective as conventional therapy." In addition, she said, "you can treat the patient in one visit." Nodules occur, she explained, "because almost everyone has some fibrotic reaction to the emulsion. They always go away in about six months."

While in conventional therapy the patient is injected with pollen extracts in saline solution at weekly or monthly intervals, extracts emulsified in mineral oil require only a once-a-year shot.

Response Is Hard to Evaluate

Many allergists feel that neither therapy has been sufficiently evaluated. Moreover, the formulas, both for aqueous and emulsified extracts, vary from one allergist to another, as do injection schedules. "The only thing common to all such programs of treatment is the hypodermic injection of pollen extracts," according to Dr. William B. Sherman of the Cooke Institute of Allergy in New York City. And the only measure of the effectiveness of therapy is the patient's statement that his misery has diminished.

Difficulty in evaluating therapeutic results was demonstrated by Dr. Francis Lowell of Harvard University Medical College, who described a double-blind study in which aqueous pollen injections were compared with placebo injections. When the code was finally broken at the end of the two-year study, Dr. Lowell discovered that while many patients in both groups had reported a good response, it became evident during the second year of the study that patients receiving allergenic extracts improved more than those receiving placebo injections.

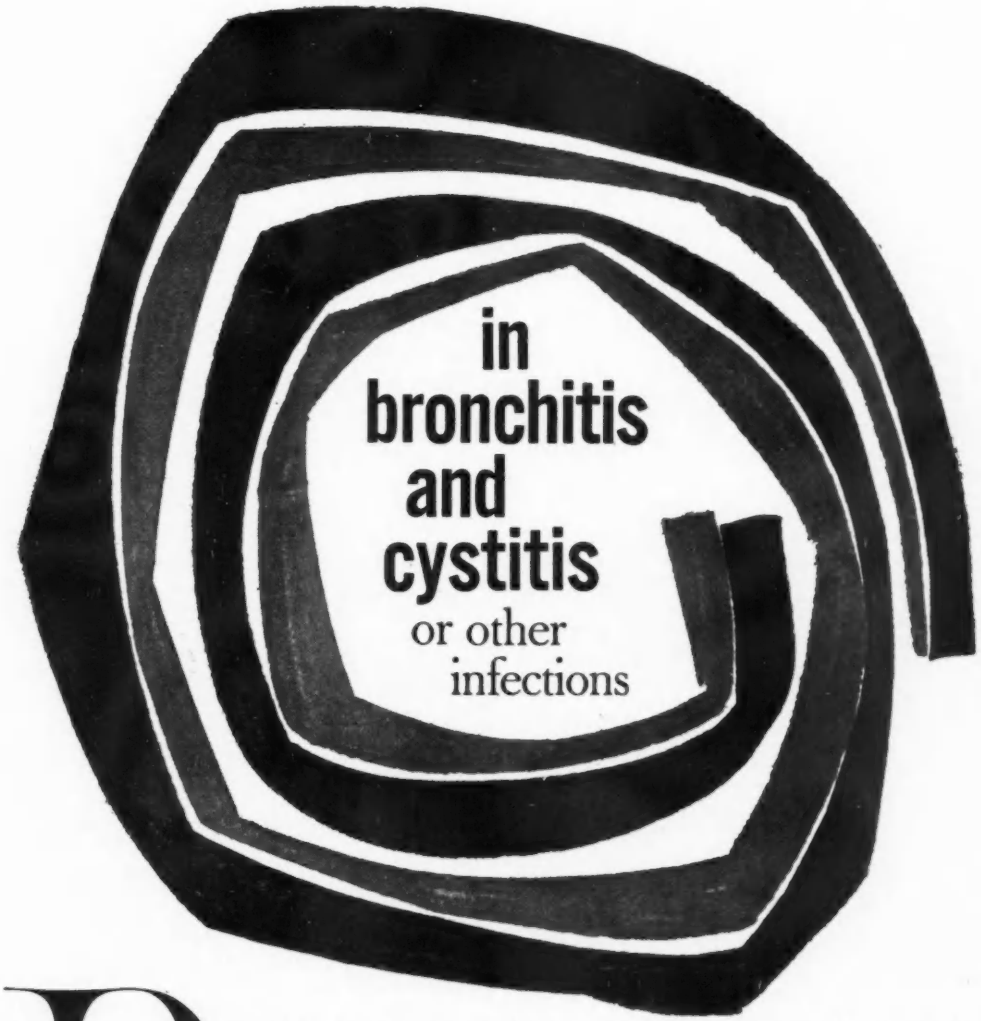
Dr. Brown objected, maintaining that allergic phenomena are qualitative, not quantitative, and cannot be evaluated by the usual statistical methods. "Traditional allergy," he said, "represents a form of scientism. It is a simplistic and naive reduction of scientific inquiries to isolated explanations. . . . I treat on the firm foundation of the patient's clinical sensitivity, present state, and anticipated exposure."

Dr. Brown attributed his excellent results to the emulsion he uses, and to the double-hubbed needle with which he injects the repository dose. He has applied for patents on both the needle and his emulsifier, he said, adding that both will be available, royalty free, to any physician or institution, or he may assign them to the Government.

Nonetheless, Dr. Arbesman was doubtful that Dr. Brown's results could be duplicated, observing that "it is very hard to have 100 per cent effective results in chronic disease."

Countered Dr. Brown: "I've treated 321 allergic allergists with emulsion injections. Now, 321 allergic allergists are not to be sneezed at." ■

DRS. LOWELL and Brown argue over evaluation of Dr. Mary Loveless' (l.) therapy.



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ALL THAT'S SWALLOWED ISN'T FOOD

Man's tendency to eat odds and ends extraneous to a normal diet only started in the Garden

Swallowed or aspirated foreign bodies, though perhaps lacking in scientific glamor, still present a perennial challenge to the clinician, a Chicago specialist told the American Academy of Ophthalmology and Otolaryngology.

Dr. Paul H. Holinger of the University of Illinois, at the academy's annual meeting, said: "Children and adults still swallow and aspirate objects that require endoscopic removal; and yet, there are fewer and fewer reports of these in the literature of our field. In the eager search for the fenestra or the elusive foot plate of the stapes, the importance of the foreign body problem and the significance of our specialty's relation to it are, somehow, being overlooked."

Dr. Holinger himself has not overlooked the problem. His report, covering a 25-year period, included close to 3,000 cases. Seventy per cent were under 14 years old; more than half were under three. Food, usually found in the cervical esophagus, accounted for nearly half the foreign objects.

In children, the most common objects found were nuts, bits of raw carrot, crisp bacon, dried beans (often from bean shooters), coins, and hardware such as nails, screws, staples, can openers, cartridges, pins, and metal toys. "The smaller objects are aspirated, the large ones are found in the esophagus or stomach."

Adults are not immune to the foreign-body menace, says Dr. Holinger. Common etiologic factors in this group are "hasty, gluttonous feeding," false dentures (which make chewing difficult), laughing while eating, and swallowing mechanisms disturbed by senility or alcohol.

Not Always an Emergency

Discussing removal of the ingested objects, the Chicago specialist reminded his colleagues that a foreign body in the throat is not an emergency unless the airway is obstructed.

"If two hours are spent in preparation, safe endoscopic removal may take only two minutes. But if only two minutes are taken for preparation, the endoscopist may find himself attempting makeshift, ineffective procedures for the next frustrating two hours."

One of the easiest objects to recover is the bobby pin, he said. "A magnet on a swallowed string can be used to recover bobby pins from as far as the third portion of the duodenum."

Safety pins are common in the diaper-age group. "As foreign body problems, necessitating endoscopic removal, they are almost invariably open, point upward."

In his own series, says Dr. Holinger, external surgery was never required when the object was lodged in the pharynx, hypopharynx or larynx. Bronchial and esophageal foreign bodies were scarcely more demanding—less than one per cent required surgical removal. Mortality in the series, he adds, was less than 0.3 per cent. ■

'OUT WITH THE BAD AIR IN WITH THE GOOD'

Columbia team turns old saw into a new therapeutic formula to counter hemorrhagic shock

In this era of "heroic" procedures, hemorrhagic shock is a special nightmare to surgeons and anesthesiologists. The operation may be a success, all the known "reliable" procedures for averting crisis applied, and still the patient dies.

Fortunately, this complex reaction is also the most easily produced in the laboratory. A research team at Columbia University College of Physicians and Surgeons, headed by Dr. Gabriel C. Nahas, has taken advantage of this small piece of luck to reassess the problem and offer a new clinical approach.

The most dangerous end result of shock, Dr. Nahas explains, is generalized acidosis, which can run out of control, overwhelm the patient, and cause death in spite of prompt replenishment of blood volume and drug therapy. Dr. Nahas, Dr. William Manger and their team began concentrating on this aspect of the problem in the 1950s, and three years ago began study of it in isolated, perfused dog hearts.

They have almost categorically concluded that direct correction of acidosis alone is not enough. The more basic problem of tissue oxygen supply must also be attacked.

The team discovered that THAM, most commonly used to control the pH of water in which live fish are shipped, could reverse failure caused by excess carbon dioxide levels in the perfused heart. Unfortunately, THAM sometimes depressed ventilation and had hypoglycemic effects in large doses. Nevertheless, it came into use clinically in several medical centers, where it proved helpful in cases of acidosis where renal or cardiac lesions forbade the employment of common sodium buffers.

THAM Alone Not Enough

Further work at Columbia showed that THAM also could head off overwhelming acidosis when massive transfusion of ACD bank blood were required. And the team proved that slow transfusion plus moderate hyperventilation could lessen danger in severe hemorrhage, extracorporeal circulation and exchange transfusion of the newborn.

But THAM alone was not enough. Correction of blood pH—"in the patient, in the bypass, or in blood-bank blood—has never appeared to be the whole answer," according to Dr. Nahas.

"Under normal circumstances," he explains, "the body constantly excretes acid through the kidneys and other organs, but especially through the lungs in the form of CO_2.

No Guarantee of Survival

"When ventilation—and therefore gas exchange — is compromised (under anesthesia, for example) acid begins to accumulate and profound disturbances occur. If allowed to continue, these can become irreversible."

Sometimes, he notes, excess carbon dioxide in the lungs can be blown off by hyperventilation in time to prevent tissue trouble. But not in hemorrhagic shock, where there is already a serious acid overload. And even steady maintenance of normal circulatory pH is no guarantee of survival—at least in the laboratory.

"On the other hand, when we have flooded the lungs with oxygen, thus improving O_2 transport, and at the same time have maintained normal blood pH, survival rates have dramatically improved."

In groups of animals in experimental shock, the team has tested six different types of therapy: transfusion with their own heparinized blood, infusion of buffer solution, THAM with sodium bicarbonate, infusion with isotonic sodium chloride, intravenous isotonic saline combined with 100 per cent oxygen administered through nasal catheter, and, finally, THAM-bicarbonate solution plus 100 per cent oxygen intranasally. In most of the groups, survival figures stood just below 50 per cent. But in the group given buffered THAM plus oxygen, 11 out of 12 dogs lived, report the Columbia investigators.

"While we are not yet willing to be unequivocal about it," Dr. Nahas concludes, "it would appear that correction of acidosis in hemorrhagic shock is satisfactorily effective only when we make certain of increasing oxygen delivery to the tissues." ■

DR. NAHAS (l.) prepares THAM solution.

TRACING reveals effect of the buffer.

THE HIGH COST OF COUGHING

Harvard surgeon says death from bronchopneumonia is often due to energy failure

The death certificate in postsurgical fatalities often reads: "Bronchopneumonia." But the primary cause of this terminal condition is not infection, says a Harvard surgeon. It is energy failure.

Breathing and coughing exact a far greater toll on the body's resources than these patients can pay, Dr. Francis D. Moore told the American College of Surgeons.

Failure to meet the energy demands of breathing, he says, results in ventilatory insufficiency. Failure to meet the cost of coughing leads to pulmonary sepsis. And the two failures accentuate each other. The combined result is pulmonary death, "a form of fatality that now seems to have superseded renal insufficiency much as the latter superseded shock as the terminal mechanism in competently treated trauma."

Dr. Moore cites as "very misleading" the current emphasis on sepsis as the cause of this type of death. "It is a false hope to believe that hospital cleanliness will rescue from pulmonary infection the patient whose body cannot meet the energy needs of breathing and coughing."

Rather than focusing on the hospital environment, attention should be directed primarily toward overcoming predictable energy failure in these patients, Dr. Moore believes. Unfortunately, "the treatment of circulatory failure is well developed but treatment of failure to meet the cost of breathing and coughing is still in its infancy."

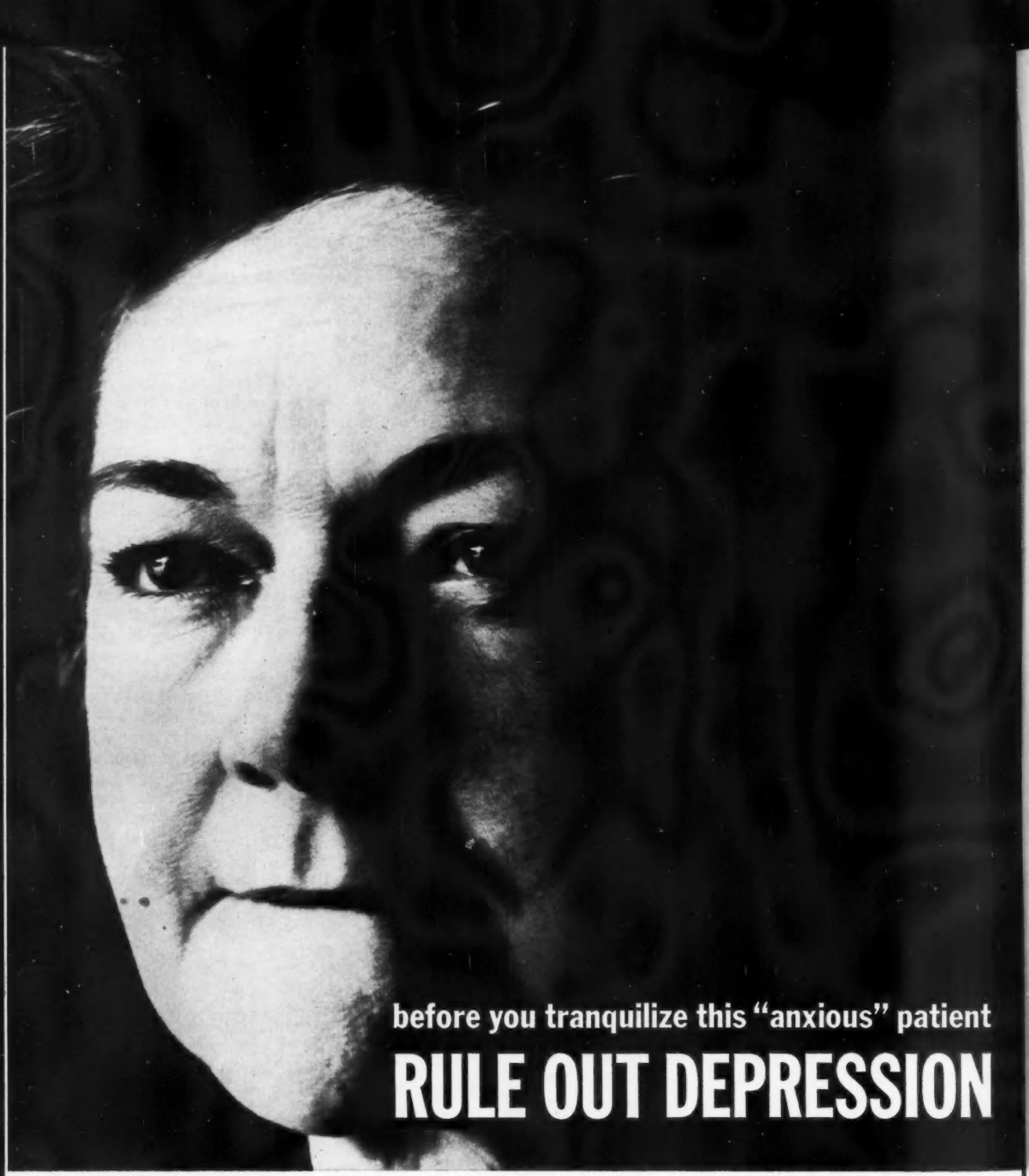
In explaining the mechanism of energy failure, Dr. Moore pointed to studies of "the large bag of water in which each of us lives," which show that the combined ravages of severe injury, infection and starvation tax the body's energy-producing system more acutely than any other disease process. As the energy output drops, the power to operate the respiratory muscles becomes a critical determinant for survival.

Often the patient is left with barely enough strength to breathe. If coughing —a "much more energetic muscular exercise—is added, "it becomes clear why pneumonia, pneumonitis and atelectasis, or broncho pneumonia, is the end stage."

But, Dr. Moore suggests, little if any accurate knowledge now exists about the actual energy depletion which threatens the victims of acute sepsis and starvation. Provision of calories can spare body tissues but "we are currently unable to discern what caloric provision is most effective, in what concentration it should be given, or how it should be given so as to avoid water overloading."

One of the few available measures for "sparing the body muscle mass," he believes, is intermittent positive pressure respiration through a cuffed endotrachial tube.

Another possibility, Dr. Moore points out, is the use of organic buffers such as "tris" to extend the work-period of muscle by buffering or counteracting the by-products of contraction. Also hopeful, he believes, is the search for enzymes or hormones which increase the body's efficiency in energy expenditure. ■



before you tranquilize this "anxious" patient

RULE OUT DEPRESSION

"A 44-year-old housewife with symptoms of anxiety referable to her heart and stomach. She also complained of chronic fatigue, irritability, insomnia and loss of appetite. All examinations were negative for the presence of organic disease. During the previous two years she had received four different tranquilizers and several sedatives, all without benefit...."

GP19

ANXIETY can be a symptom of depression.

Overt signs of anxiety often have as their root basically depressed feelings. The "anxious" patient may also be fatigued and apathetic. Examination often reveals anxiety to be only one of several emotional symptoms dominated by depression.

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2. *very low side effects*—to date, only 1.2% reported side effects (in over 100 studies) requiring discontinuance.
3. *great economy*—one of the least expensive of all the antidepressants.
4. *published record of success*—in two years, more than 100 scientific reports on Nardil have been published.
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Full dosage information, available on request, should be consulted before initiating therapy.

*Hobbs, L. F.: Virginia M. Month. *86*:692, 1959.

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relieves depression, the root of many medical problems

"She was then started on Phenelzine [Nardil] 15 mg. three times a day. She began to feel better within several days and a pronounced improvement was noticed within ten days. Tension was greatly lessened and the majority of her anxiety symptoms had disappeared. She was sleeping well, eating better and complaints of fatigue were gone. Later she remarked that she was 100% better and that she had not felt so well in ten years...."*

WARNER CHILCOTT

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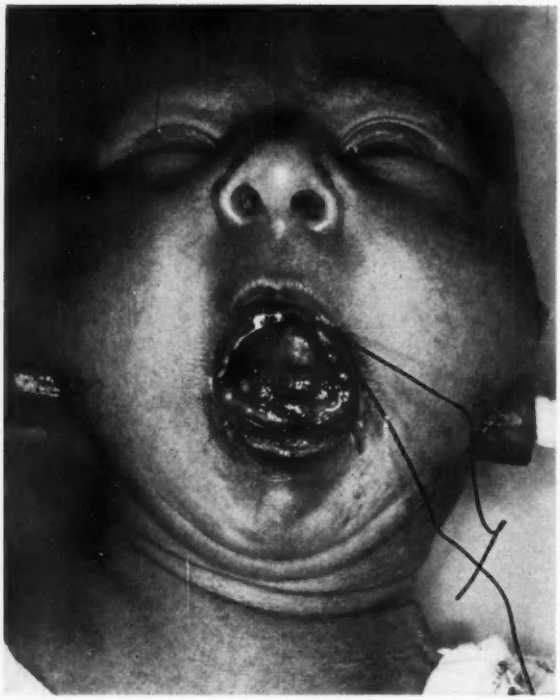
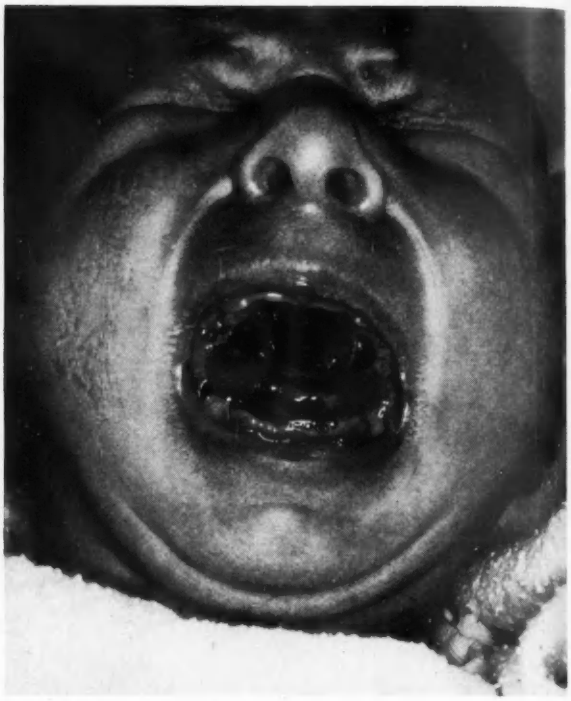


WIRE FIXES tongue. Prior infection caused mouth lesions.



WEEK LATER, wire ends are cut; in one month, wire is removed.

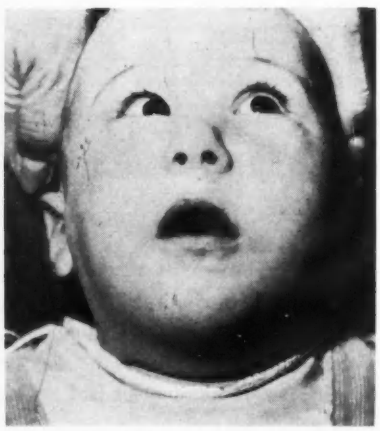
'K WIRE' FIXES ROBIN'S SYNDROME

California surgeon reports success with new technique in preventing glossoepiglottic obstruction in four-day-old infant with congenital jaw malformation and cleft palate

A promising new method of correcting the congenital malformation of the lower jaw and palate known as Pierre Robin's syndrome was described to the American Society of Plastic and Reconstructive Surgery in New Orleans. Dr. Russel C. Hadley of Hollywood, Calif., without claiming to have originated the method, said it may offer distinct advantages, although he does not suggest that it replace the time-tested Beverly Douglas procedure of suturing the tongue to the lip.

The technique involves use of a transmandibular Kirschner wire which transfixes the tongue in anterior position and thereby prevents glossoepiglottic obstruction. The California surgeon first employed the method a year ago in a four-day-old infant with marked obstructive symptoms, complicated by a local infection after attempted tongue-lip fixation which had been performed elsewhere as an emergency operative procedure.

With the patient under light nasopharyngeal anesthesia, he set the wire through both cheeks, mandible and tongue. After seven days, the wire ends were clipped beneath the skin, and after 30 days the wire was removed. Results were excellent. At 11 months, the patient's jaw had developed, and there were no operative scars. A subsequent operation on another patient promises to be just as successful as the first one.



AT 11 MONTHS, jaw appears normal.

"With some improvement in technique the method should be simple, and relatively bloodless, under light nasopharyngeal anesthesia," Dr. Hadley comments. "It requires only five to ten minutes to perform, allows freedom of the tongue and early nipple feeding, involves no major secondary operative procedure and requires relatively short hospitalization." He emphasizes that many more trials will be necessary before the K-wire technique can be fully evaluated.

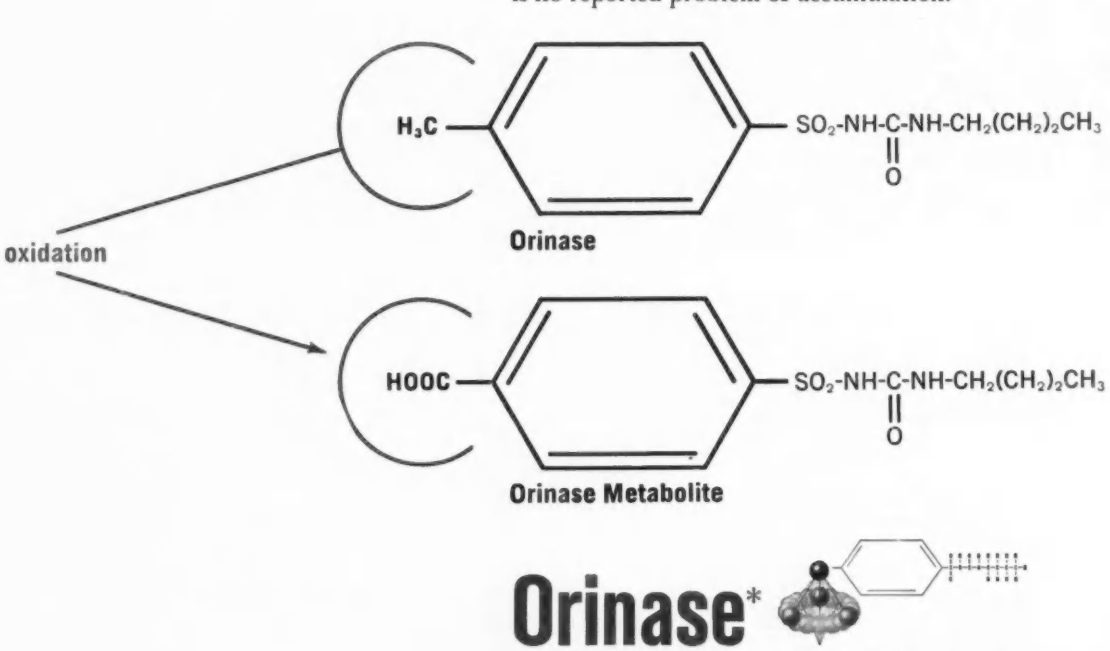
Dr. Hadley notes that the incidence of the syndrome is higher than previously suspected and that the mortality rate in untreated cases is 33 to 50 per cent. However, he says, many cases do not necessarily require surgical intervention and may respond to prone Trendelenburg positioning in a hospital where constant pediatric nursing care can be maintained. ■

Why is the methyl "governor" in Orinase so important?

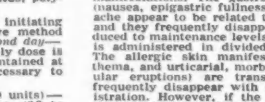
One of the most significant advantages of Orinase therapy is the rarity of associated hypoglycemic reactions.

This widely-reported clinical benefit is a function of the exclusive Orinase methyl "governor." Lending itself to ready oxidation (principally, it is thought, a hepatic process), the methyl group ensures prompt metabolic inactivation of the Orinase molecule. What actually happens is that a rapidly- and continuously-excreted carboxy-metabolite is produced that has no hypoglycemic activity at the existing levels.

As a result of the oxidation of its methyl group, Orinase shows a decline in activity soon after it reaches its effective peak in the plasma. Maintenance dosage serves to reduce blood sugar levels to normal, but rarely below that point, and there is no reported problem of accumulation.



Orinase*



An exclusive methyl "governor" minimizes hypoglycemia

Indications and effects: The clinical indication for Orinase is stable diabetes mellitus. Its use brings about the lowering of blood sugar; glycosuria diminishes, and such symptoms as pruritus, polyuria, and polyphagia disappear.

Dosage: There is no fixed regimen for initiating Orinase therapy. A simple and effective method is as follows: *First day*—6 tablets; *second day*—4 tablets; *third day*—2 tablets. The daily dose is then adjusted—raised, lowered or maintained at the two-tablet level, whichever is necessary to maintain optimum control.

Patients receiving insulin (less than 20 units)—discontinue insulin and institute Orinase; (20 to 40 units)—initiate Orinase with a concurrent 30 to 50% reduction in insulin dose with a further careful reduction as response to Orinase is observed; (more than 40 units)—reduce insulin by 20% and initiate Orinase with a further careful reduction in insulin dosage as response to Orinase is observed. In candidates for combined Orinase-insulin therapy, an individualized schedule is usually obtainable during a trial course of two or more weeks.

Contraindications and side effects: Orinase is contraindicated in patients having juvenile or growth-onset, unstable or brittle types of diabetes mellitus; history of diabetic coma, fever, severe trauma or gangrene.

Side effects are mild, transient and limited to approximately 3% of patients. Hypoglycemia and toxic reactions are extremely rare. Hypoglycemia is most likely to occur during the period of transition from insulin to Orinase. Other untoward reactions to Orinase are usually not of a serious nature and consist principally of gastrointestinal disturbances, headache, and variable allergic skin manifestations. The gastrointestinal disturbances (nausea, epigastric fullness, heartburn) and headache appear to be related to the size of the dose, and they frequently disappear when dosage is reduced to maintenance levels or the total daily dose is administered in divided portions after meals. The allergic skin manifestations (pruritus, erythema, and urticarial, morbilliform, or maculopapular eruptions) are transient reactions, which frequently disappear with continued drug administration. However, if the skin reactions persist, Orinase should be discontinued.

Clinical toxicity: Orinase appears to be remarkably free from gross clinical toxicity on the basis of experience accumulated during more than four years of clinical use. Crystalluria or other untoward effects on renal function have not been observed. Long-term studies of hepatic function in humans and experience in over 650,000 diabetics have shown Orinase to be remarkably free of hepatic toxicity. There has been reported only one case of cholestatic jaundice related to Orinase administration, which occurred in a patient with pre-existing liver disease and which rapidly reversed upon discontinuance of the drug.

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SPLENECTOMY IS ADVISED FOR BLEEDING DISORDER

Improvements in medical therapy have made splenectomy less urgent for patients with acute idiopathic thrombocytopenic purpura (ITP), but splenectomy remains the treatment of choice for the chronic form of the disease.

Spontaneous remissions occur in most patients with acute ITP. Adrenal steroids and platelet transfusions can be used to control bleeding episodes, and the course of the patient's disease followed with relatively little danger of fatal hemorrhage. Of 22 patients with acute ITP, 25 per cent treated with steroids, and 67 per cent treated by splenectomy experienced complete remissions.

In contrast, steroids rarely help patients with chronic ITP. Although the disease is mild in many, splenectomy is the treatment of choice for those who need definitive therapy. Only eight per cent of patients with the chronic form responded to steroids, whereas 52 per cent had a complete remission after splenectomy.

The size of the dose of steroids does not seem to influence the outcome of treatment. The only patients who had a complete remission on steroids alone received the equivalent of 40 mg or less of prednisone a day for at least three weeks. None of those who received 60 mg or more responded at all.

The possibility of arousing latent lupus erythematosus is one reason given for delaying splenectomy in ITP, but none of the 62 splenectomized patients in this series have shown signs of systemic lupus after one to five years. *Bunting, Kiely and Campbell; AMA Arch. Int. Med., Nov. 1961, pp. 73-78.*

INTERVIEWS PRODUCE CHANGE IN BLOOD PRESSURE

In a study, undertaken as part of a research program on the relation of psychological factors to the pathogenesis of hypertension, the subjects were 17 women with essential hypertension. Each gave a life-history interview throughout which blood pressure was recorded every two minutes and skin temperature, skin resistance and heart rate were recorded continuously.

The interview, although not deliberately stressful, produced a marked pressor effect in the subjects. On the average, a blood pressure increase of 40 mm was sustained throughout the interview. Moment-to-moment fluctuations around this mean were related to changes in affective involvement. Blood pressures did not return to original levels during the resting period, and during the second half of the interview they almost reached the level of the first half.

Involvement — meaning such factors as the directness, intensity, and immediacy of the interaction of the subject with her own associations, and with the interviewer — was a better predictor of physiological behavior than was the affect, or content, of what the patient was talking about. The process of communicating feelings and experiences in the interview situation may arouse emotional involvement similar in degree and kind to that experienced in real life situations.

The mechanisms by which transient blood pressure elevations become sustained high blood pressure are not known, but episodes of increased pressure induced by emotion, as well as by other agents, may initiate the processes which lead to essential hypertension. *Hardyck, Singer and Harris; AMA Arch. Gen. Psychiat., Nov. 1961, pp. 116-21.*

CANCER OF LIVER COMPARED IN TWO GROUPS OF NEGROES

Primary carcinoma of the liver has the same over-all characteristics in American Negroes as in whites, but a comparison of the disease in American and African Negroes shows some striking differences.

The incidence of primary carcinoma of the liver in the American Negro population is 0.52 per cent, according to autopsy studies done at Homer G. Phillips Hospital, St. Louis, over a 20-year period. Among Africans, incidence ranges from 60 to 90 per cent of the total cancer rate.

In American Negroes, the disease usually is found after the age of 40, whereas, in South African Negroes, it occurs before 40 years of age in about 80 per cent of the cases.

The survival time of American Negroes with primary carcinoma of the liver ranges from months to one or two years, but the disease is rapidly fatal in Africans. In some cases, death occurs within two weeks.

Not enough is known about cancer of the liver in Africans to make definite conclusions. Many hypotheses have been put forward to explain the discrepancies in manifestations of primary carcinoma of the liver in different races and geographic areas, but none are satisfactory. *Ohin; AMA Arch. Surg., Nov. 1961, pp. 21-27.*

MURDEROUS BEHAVIOR ASSOCIATED WITH ENURESIS IN CHILDREN

A study of eight boys who committed murder shows definite psychodynamic patterns in the boys and their families. In all eight cases, one or both parents fostered or condoned murderous assault, but this alone does not account for the boys' malignant behavior. Disorders of character and biologic factors are also involved.

Six of the eight boys were bedwetters until six or seven years of age, and one has been persistently enuretic until his present age of 16. This incidence of enuresis is not statistically significant, but there is a correlation between persistent enuresis and juvenile delinquency. Both seem to be manifestations of a character disorder. "In this type of character [enuretic] there is probably . . . a high degree of irritability, explosiveness, impulsiveness, and lack of inhibition which permeates the whole personality." The combination of this character and the psychodynamic factors in these boys' backgrounds might well result in the extremely antisocial behavior they displayed. Three of the boys had epilepsy, which may also have contributed to their overt behavior. Epilepsy is often associated with violent rage reactions.

Although attitudes similar to those of the boys' parents might be found in other families, they would not produce such aggressive behavior in children with different character structures and psychodynamics. *Michaels; AMA Arch. Gen. Psychiat., Nov. 1961, pp. 68-71.*

CONTINUED ON PAGE 82

COLISTIN WIPES OUT SOME RESISTANT INFECTIONS

Results of treating 83 patients, most of whom had infections due to *Pseudomonas aeruginosa* or other antibiotic-resistant gram-negative organisms, with colistin *(Coly-Mycin)* are quite encouraging.

The chemical, pharmacological and antimicrobial activity of colistin is similar to that of polymyxin, but colistin causes fewer side effects. It is active against *Salmonellae, Shigellae,* coliform bacteria, *Pseudomonas, Proteus, Brucellae, Hemophilus,* some strains of staphylococci and *Candida.*

Most of the 83 patients had acute or chronic pyelonephritis, the rest had pneumonia or miscellaneous infections involving various parts of the body. The causative organism in the majority was *Pseudomonas.* Thirty-one patients improved promptly without relapse, four improved but relapsed when colistin was stopped, and 21 were considered treatment failures. For various reasons, treatment results in the remainder could not be evaluated.

Colistin was given intramuscularly and caused virtually no pain at the site of injection. Adults received an average dose of 66 mg a day, children, 0.5 to 5 mg/kg body weight a day. Intrathecal injections of colistin given to two patients with meningitis sterilized the spinal fluid but failed to halt the infection.

Four patients had side effects. Three developed perioral paraesthesias and one had an episode of vertigo. Percutaneous renal biopy of eight patients showed no evidence of nephrotoxicity. *Yow; AMA Arch. Int. Med., Nov. 1961, pp. 4-10.*

APPENDIX MAY HARBOR A VARIETY OF LESIONS

Of 4,000 appendices removed in a general hospital during a six-year period, significant lesions were found in 70 per cent of those removed for appendicitis, (primary appendices) and in 13 per cent of those removed incidental to other abdominal surgery (incidental appendices).

"Chronic appendicitis" — defined as moderate to dense infiltration of the muscle wall by lymphocytes without acute inflammatory cells — was an infrequent diagnosis. Fecaliths, accompanied by acute inflammation, were seen in many primary appendices. Fibrosis of the appendix appeared more often in middle-aged and older patients. Worm infestation was found in less than three per cent, mostly children. *Ascaris lumbricoides* was found in the appendix of one ten-year-old child who was diagnosed clinically as having acute appendicitis.

The incidence of mucocele of the appendix in this series — 0.7 per cent — is somewhat higher than other reports. Some mucoceles were massive. In three patients, they had ruptured preoperatively, and in three others they were associated with adenocarcinoma of the cecum. Most of the 29 mucoceles were in older patients, while the 14 carcinoids found were in young and middle-aged adults. None had metastasized and the carcinoid syndrome was not diagnosed in any of these patients. One 58-year-old patient, with an acute gangrenous appendix which perforated before surgery, had a primary adenocarcinoma. Metastatic tumors were found in five appendices, and endometriosis in six. *Stephenson and Snoddy; AMA Arch. Surg., Nov. 1961, pp. 15-20.*

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Kestler reports in controlled study: *Average time for restoring patients to full activity: with Soma, 11.5 days; without Soma, 41 days. (J.A.M.A. Vol. 172, No. 18, April 30, 1960.)*

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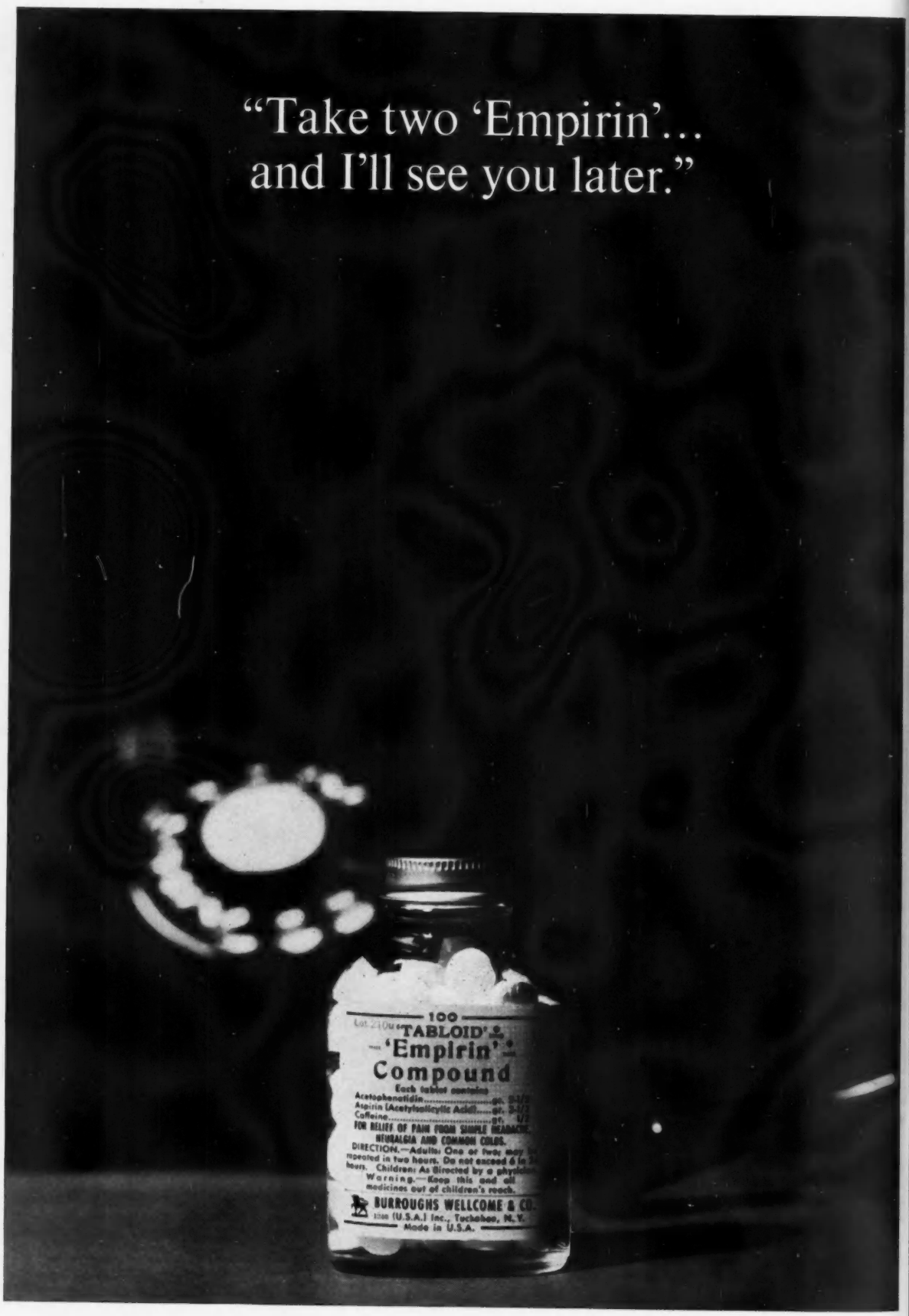
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DOCTOR'S BUSINESS

With the fund raising season now under way, a good many doctors are double-checking the income tax rules on gift-giving. Points to remember:

▸ Contributions are deductible only if they are itemized on the income tax return.

▸ Deductions can be claimed for contributions to a wide range of organizations, not merely those to churches, hospitals and charities. Others that qualify include, for example, veterans' organizations, Boy Scouts, Girl Scouts, Boys Club of America, fraternal organizations, non-profit schools and colleges.

▸ It is legal to deduct the fair market value of clothing and furniture given to charity, as well as any car expenses and out-of-pocket costs incurred when working without pay for a charitable organization. A taxpayer may not claim deductions, however, for gifts to political parties and candidates, civic leagues, chambers of commerce or individuals.

▸ Contributions, in general, are limited to a maximum of 20 per cent of income. But there is an additional allowance of ten per cent for contributions to churches and tax-exempt schools and hospitals.

Doctors in industrial centers note that factory workers, the group hardest hit by the recent recession, are financially getting back on their feet. Now, for example, the average pay envelope, after tax deductions, contains $83.40 a week for a production worker with three dependents and $75.79 for a single worker. With business improving and pay boosts taking effect in steel and autos, the Department of Labor says factory incomes are sure to set new records in the months to come.

A **Government crackdown** on "expense account living" will proceed almost as though Congress had actually passed the Administration's 1961 tax reform bill. The Internal Revenue Service says it can accomplish on its own much of what Congress would have achieved if it had OK'd the Kennedy-backed proposal. IRS agents say they have no intention of concentrating just on such obvious targets as deductions claimed for yachts and hunting lodges. An office at home, for example, or a combined business-vacation trip will get close attention, too. The Bureau also notes that a credit card no longer passes as automatic evidence of a deductible business expense; nor do checks made out to cash, or day-to-day expense diaries. And, IRS agents say, every doctor claiming his car as a professional expense must clearly show where, why and when the car was used.

Doctors with children away at college know the cost of higher education is going up. The results of two recent surveys show just how much. After checking on 97 colleges around the country, one survey shows the current academic year will cost $1,869, exclusive of books, clothing, laundry and entertainment. A year ago the figure was $1,777 and 20 years ago just $740. The second survey — of Ivy League schools — puts the total figure at $2,500 a year.

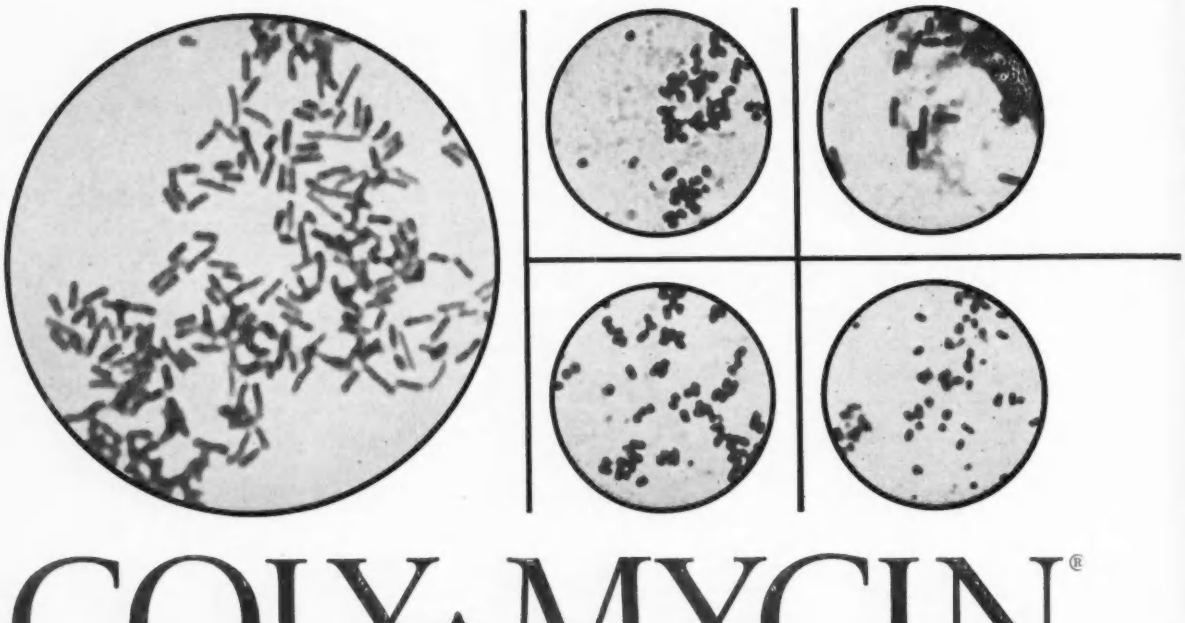
A gap in physician liability insurance coverage may soon be closed. The American Hospital Association is asking hospitals around the country to seek coverage for doctors who serve on staff committees. The reason is the number of damage actions instituted by MDs who have had their hospital privileges taken away from them at the behest of various staff committees. Because most hospitals do not now carry this liability coverage, individual committee members have been held personally liable. The AHA says that hospitals can get the coverage at little cost.

Patients are now spending a total of $25 billion a year for all types of medical care, according to George Bugbee of the Health Information Foundation. And, says Mr. Bugbee, some $5.5 billion of this figure — about 30¢ out of every medical-care dollar — is going for hospital care, "the fastest rising item in the medical price index." Noting that hospital utilization must inevitably increase, Mr. Bugbee takes a look at what area-wide planning may accomplish and concludes: "The future will certainly produce fewer but bigger hospitals."

Credit cards are being sent out by some retailers as a means of attracting new customers. Atlanta's credit bureau, for example, says companies increasingly are inclined to send "good credit risks" cards they haven't asked for. Particularly active in this effort: oil companies and department stores.

ANNOUNCING

a new antibiotic for gram-negative infections...
especially those caused by Pseudomonas



COLY·MYCIN®
INJECTABLE

THE ONLY BRAND OF COLISTIMETHATE SODIUM

COLY-MYCIN IS PARTICULARLY VALUABLE IN ACUTE OR RESISTANT GRAM-NEGATIVE URINARY INFECTIONS. It is "the drug of choice"[5,15] in many urinary infections due to Pseudomonas. Coly-Mycin has also been of value in respiratory, blood stream, surgical, wound and burn infections when due to sensitive organisms. It is often successful when other antibacterials fail.[1-5]

FOR EXAMPLE: In one study, Coly-Mycin cleared the urinary tract of Pseudomonas infection in 58 of 60 patients. In another study, "Fifteen of the 18 patients infected with *Escherichia coli* who were treated with colistin [Coly-Mycin] had sterile urine cultures upon conclusion of treatment."[13]

PRIMARILY BACTERICIDAL[1,6,8,10] Unusually effective against a wide range of gram-negative pathogenic bacteria, especially *Pseudomonas aeruginosa, Escherichia coli, Aerobacter aerogenes* and *Klebsiella pneumoniae.*[1-15] (Not effective against Proteus.)

RAPIDLY EFFECTIVE Therapeutic blood levels[1,6,8,10,11] and urine concentrations are quickly attained.[5,8]

EXCEPTIONALLY WELL TOLERATED in patients of all ages at recommended dosage. No blood dyscrasia, renal damage, eighth nerve disturbance or other serious reaction has been reported, but minor side effects—such as circumoral paresthesias, pruritus, vertigo, and drug fever—have occurred.

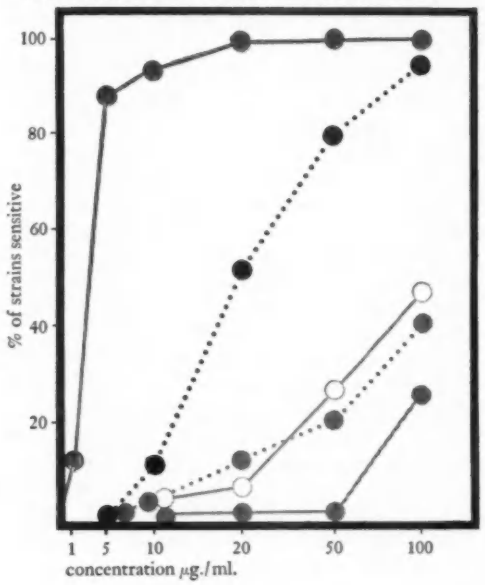
- To date there have been no reports of monilial overgrowth due to Coly-Mycin therapy.
- Resistant strains develop infrequently.[1,6,10]
- No cross resistance to broad-spectrum antibiotics has been reported,[6] however, cross resistance to polymyxin does occur.

Full dosage information, available on request, should be consulted before initiating therapy.

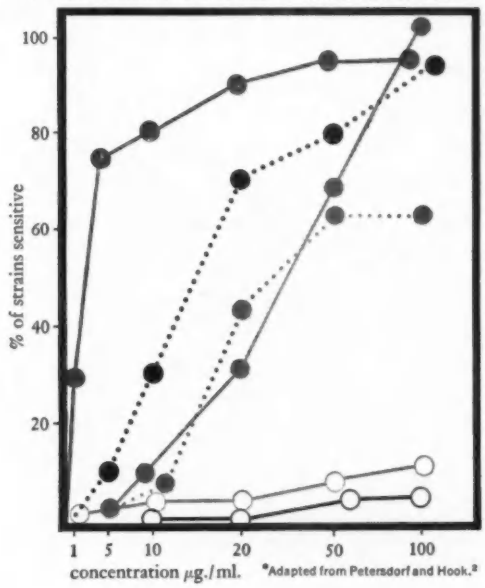
Supplied: in vials containing 150 mg. colistimethate sodium and 8 mg. dibucaine hydrochloride for reconstitution with 2 ml. sterile distilled water for injection. *For intramuscular injection only.*

References: 1. Carroll, G., and Malette, W. F.: J. Urol. *85*:86, 1961. 2. Petersdorf, R. G., and Hook, E. W.: Bull. Johns Hopkins Hosp. *107*:133, 1960. 3. Hall, J. W.: Am. J. M. Sc. *240*:561, 1960. 4. Zinsser, H. H.; Lattimer, J. K., and Seneca, H.: J. Urol. *83*:755, 1960. 5. Roberts, C. E., Jr., and Kirby, W. M. M.: Colistin in the treatment of hospitalized patients with Pseudomonas infections, presented at the 1960 Conference on Anti-Microbial Agents, Washington, D. C. 6. Schwartz, B. S., *et al.*: Antibiotics Annual 1959-1960, New York, Antibiotica, Inc., 1960, pp. 41-60. 7. Graber, C. D.; Tumbusch, W. T., and Vogel, E. H., Jr.: *Ibid.*, pp. 77-79. 8. Wright, W. W., and Welch, H.: *Ibid.*, pp. 61-74. 9. Ross, S.; Puig, J. R., and Zaremba, E. A.: *Ibid.*, pp. 89-100. 10. McCabe, W. R.; Jackson, G. G., and Kozij, V. M.: *Ibid.*, pp. 80-88. 11. Blaustein, A.: *Ibid.*, pp. 75-76. 12. Meleney, F. L., and Prout, G. R.: Surg. Gynec. & Obst. *112*:211, 1961. 13. McCabe, W. R., and Jackson, G. G.: Am. J. M. Sc. *240*:754, 1960. 14. Carroll, G.: J. Oklahoma M. A. *53*:678, 1960. 15. Seneca, H.; Lattimer, J. K., and Zinsser, H.: New York J. Med. *60*:3630, 1960.

BACTERICIDAL ACTIVITY OF COLY-MYCIN AND OTHER ANTIBIOTICS AGAINST PSEUDOMONAS* 4



BACTERICIDAL ACTIVITY OF COLY-MYCIN AND OTHER ANTIBIOTICS AGAINST ESCHERICHIA COLI* 5



*Adapted from Petersdorf and Hook.[2]

Coly-Mycin
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Kanamycin
Streptomycin
Chloramphenicol
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makers of Gelusil Tedral Mandelamine Peritrate Proloid

Product News

TO STOP ITCHING

Periactin (Merck Sharp & Dohme) is a serotonin and histamine antagonist — cyproheptadine — which reduces itching in skin conditions such as urticaria, angioneurotic edema, neurodermatitis, eczema, drug reactions, neurotic excoriations, poison ivy, sunburn, insect bites, pruritus ani and vulvae, and chicken pox.

Drowsiness is reported to be an occasional side effect of *Periactin*.

Adult dosage is three or four tablets a day; children, two to 14 years old, 1½ to four tablets. Each tablet contains 4 mg cyproheptadine HC1. *Periactin* is available on prescription only.

LEAD-LINED GLOVES

Rad-Bar medical x-ray gloves, made of seamless plies of DuPont neoprene, are crack-resistant, flexible and contoured to fit the hand. They can be disinfected or cleaned with soaps, detergents or chemical solutions without damage. Evenly dispersed lead particles in the inner plies provide opacity to diagnostic radiation. The gloves come in four sizes, including an extra-

small size for women. For names of suppliers, write: Charleston Rubber Co., 184 Stark Industrial Park, Charleston, S. Car.

FOR COLDS

Contac (Menley & James) is a proprietary drug for relief of nasal congestion due to head colds and hay fever. Each capsule contains chlorpheniramine maleate, phenylpropanolamine HC1, and a mixture of belladonna alkaloids in the form of tiny pellets with coatings of various thicknesses to provide continuous medication over a period of 12 hours. Dosage is one capsule in the morning and one at night. *Contac* is a nonprescription drug but elderly persons, children under 12, and patients with hypertension, heart disease, diabetes or thyroid disease are cautioned to take it only as directed by a physician. *Contac* is the first product of Menley & James Laboratories, a subsidiary of Smith, Kline & French Laboratories.

PREGNANCY TEST

Ortho Pregnancy Test Kit provides a procedure for diagnosing pregnancy without using animals. The method immunologically detects HCG in urine, and gives reliable results as early as six weeks after onset of the last menstrual period.

The kit, containing material for ten tests, includes an antigen — microscopic latex particles coated with purified human chorionic gonadotropin; an antiserum — obtained from rabbits immunized with HCG; a vial of turbid, grayish-white saline solution which is used as the standard of comparison for the test results; and disposable test tubes.

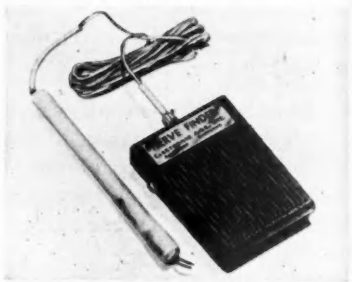
The test takes four hours. Results in over 1,000 women indicate that the *Ortho* test is as accurate as the frog test. With the *Ortho* test, about 1.5 per cent of tests are false-negative, whereas, with the frog test, about 1.5 are false-positive.

FOR NERVE DISSECTION

Nerve Finder locates nerves during surgery by stimulating both nerves and muscles with electrical impulses delivered to a probe. The probe is attached by an eight-foot flexible cord to a mercury battery enclosed in the pedal switch.

In surgery requiring careful dissection, nerves can be differentiated from the material to be removed by carefully moving the *Nerve Finder* probe over the operative area. For instance, in parotid gland surgery, twitching of the lips or eyelids will indicate that the probe is near the facial nerve.

The nine volt battery produces 300 volts of stimulus when the probe is not contacting tissue. Voltage drops to 60 or less when the probe makes contact, and to 30 when using the probe tips only. If lower voltage is needed, as in neurosurgery, a lower volt battery may be used. The *Nerve*



Finder is manufactured by Electronic Aids, Inc., 2615 Windsor Ave., Baltimore 15, Md. Cost: $99.50.

CAPSULES

○ During the second International Congress of Neurological Surgery held in Washington, D. C., Dr. Alan Van Poznak of New York Hospital-Cornell Medical Center reported the use of methoxyflurane (*Penthrene*, Abbott) as the primary anesthetic in 300 neurosurgical procedures. Methoxyflurane, a non-explosive, non-flammable anesthetic, pharmacologically similar to diethyl ether, is a safe and versatile anesthetic for neurosurgery, he said.

○ *The University of North Carolina School of Medicine has begun broadcasting educational FM programs to groups of physicians meeting in local hospitals. A telephone hookup permits listeners to question the speakers. Twenty-four weekly programs consisting of a 30-minute presentation and 30-minute question and discussion period are planned for this year. The programs are supported in part by a grant from Merck Sharp & Dohme.*

○ Blood, blood derivatives and substitutes are the subjects of a 62-page guide, *The Use of Blood*. Separate sections are devoted to the properties of human blood, substitutes for plasma and serum, techniques and hazards of administration, and equipment for handling blood. The booklet may be obtained by writing Abbott Laboratories, North Chicago, Ill.

○ *The Government last month granted Chas. Pfizer & Co., a license for Sabin Type II polio vaccine. Type I and Type II are now available from Pfizer in 10-dose preconstituted vials and in 100-dose concentrate form for reconstitution with distilled water.*

Since May 11, Synalar Cream has cleared many previously intractable dermatoses. Have you evaluated it in your practice?

On May 11, 1961, Synalar Cream was introduced to the medical profession as "a new[1] topical steroid, a new base, a new standard of effectiveness."

Clinical evidence since its introduction continues to point to its efficacy in speeding remission of many dermatoses previously resistant to other topical steroids. Robinson[2] studied Synalar in 149 patients with dermatoses usually seen in the dermatologist's office; 137 benefited from Synalar therapy, only 12 were unimproved.

What accounts for Synalar performance? First, it has 40 times the topical potency of hydrocortisone. Second, a specially prepared cream base smooths on easily over inflamed lesions in sparing amounts. Proved non-sensitizing in repeated insult patch tests on 200 patients, this water-washable base is odorless, non-staining, and cosmetically acceptable even to the fussiest patient.

If you have not already done so, Syntex invites you to make your own Synalar evaluation.

1. Select three of your most stubborn cases—dermatoses refractory to previous topical steroid therapy or hitherto responsive only to the systemic corticosteroids.
2. Treat them with Synalar Cream for two weeks.
3. Judge the results.

New 5 Gm. Size Now Available

Synalar is now available in an economical 5 Gm. tube, in addition to the original 15 Gm. tube.

For a complimentary starter supply for three patients, please use the coupon below.

References: 1. Mills, J. S., *et al.*: J. Am. Chem. Soc. *82*:3399 (July 5) 1960. 2. Robinson, H. M., Jr.: A.M.A. Arch. Dermat. *83*:149 (Jan.) 1961.

Dosage and Administration: Synalar (0.025%) Cream is for topical use only. A small amount should be applied lightly to the affected skin area two or three times daily, as needed. The cream should be massaged gently and thoroughly until it disappears. Since Synalar is in a water-washable, vanishing cream base, it is easily applied and leaves no traces. Synalar may be used over long periods of time in specific conditions when deemed necessary.

Precautions: Synalar Cream is virtually non-sensitizing and non-irritating. If idiosyncrasies are encountered, Synalar should be discontinued and appropriate steps taken. In areas of infection, concomitant antibacterial therapy may be indicated. In some instances, when an emollient effect is desired, dilution of the cream with equal parts of hydrogenated vegetable oil or petrolatum makes it more acceptable and effective.

Supplied: 15 Gm. collapsible tubes. Available on prescription only.

synalar® cream **15 Gm.**

0.025% fluocinolone acetonide, Syntex

SYNTEX

Medical Department, Syntex Laboratories, Inc.
10 East 40th Street, New York 16, N. Y.
Please send me starter doses of Synalar Cream.

Name (please print) _____

Address _____

City & State _____

Field of practice _____

DEPT. W

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HELPS THE
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AGAIN...CALM,
YET FULLY
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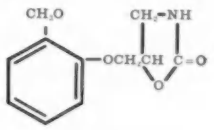
TO RESTORE THE NORMAL PATTERN OF EMOTIONAL RESPONSE

REPIDONE Mephenoxalone is a new tranquilizer which has own the capacity to relieve mild to moderate anxiety and nsion without detracting significantly from mental alertness. eated patients have shown little tendency to become sleepy or tached from reality, or to experience euphoria as a result of e drug. They generally respond normally to everyday situaons . . . require fewer restrictions on activities, and tend to mplain less frequently.

tensive trials have shown no habit-forming properties or verse effects on withdrawal, even after long-term administran. Complete information on indications, dosage, precautions d contraindications is available from your Lederle repretative, or write to Medical Advisory Department.

rage adult dosage: One 400 mg. tablet, four times daily. Supplied: lf-scored tablets 400 mg. TREPIDONE Mephenoxalone, bottle of 50.

chemically distinct from previous tranquilizers



LEDERLE LABORATORIES
A Division of AMERICAN CYANAMID COMPANY
Pearl River, New York

Books Abroad

Inhaled Particles and Vapours
Edited by C. N. Davies.
Pergamon Press, London. 495 pages. $15.00.

Beautifully printed and capably edited are the proceedings of an international symposium organized by the British Occupational Hygiene Society at Oxford in March and April, 1960. The sections of the book deal with anatomy and physiology, the physical and chemical aspects of particle retention, radioactive aerosols, vapors and particle vapor interactions, pulmonary elimination and storage of dust, asbestosis, selective sampling and pneumoconioses and, finally, a list of registrations with adequate indexes of authors and subjects.

The single theme of the book is the behavior of the animal lung toward foreign substances in the atmosphere. The subject is one of immense and immediate interest to the profession.

Much is said of the relationship of radioactivity to cancer of the lung, but the word "tobacco" does not appear in the index. Since practically every contributor to the program was an authority in the field concerned, the book is a tremendous contribution to current knowledge of air pollution.

Memoirs of a Medico
Dr. E. Martinez Alonso.
Doubleday. 335 pages. $4.50.

The author is an eminent Spanish physician and surgeon who has been also for some years physician for the Castellana Hilton Hotel, Madrid. His life has been filled with amusing and exciting incidents, including travel on a cargo ship, the Spanish Civil War, association with the British and American Embassies in Spain, and with many leading figures of our time.

The Health of Business Executives
The Chest and Heart Association
Tavistock House North,
Tavistock Square, London.

This little book provides the transactions of a one-day conference held in London in November, 1959. Leading British authorities discussed such subjects as stress, overwork, overweight, exercise, travel, high blood pressure and coronary thrombosis, chest disease in the middle-aged man, self-medication, and "facing an operation." The book is exceedingly well-written and the advice throughout is conservative and sound. Any executive would find in it many hints that might be life-saving.

The Evolution of Medical Practice in Britain
Edited by F. N. L. Poynter.
Pitman Medical, London. 168 pages. $3.50.

The editor of this book is librarian of the Wellcome Historical Medical Library in London. The essays, prepared by leaders of medicine in Great Britain, were read at the First British Congress on the History of Medicine and Pharmacy held in London in September, 1960. Practically all these papers are penetrating in their analysis of the forces which led eventually to the National Health Act. A compliment is paid to the pharmaceutical industries of England which have today achieved enviable status as full partners in medical progress.

Scissors & Scalpel

PATIENT, HEAL THYSELF

All of us are familiar with the physician who took over a practice in a village where illness was a rarity. By judiciously dropped phrases and careful insinuations, he turned the village into a community of hypochondriacs.

But this can work both ways. If the doctor isn't careful, his patients may make him sick, warns a member of the American Psychiatric Association. Patients who tell all their troubles to the family doctor usually go away feeling better, but the doctor is often upset by the experience for the rest of the day.

A ROVING EYE

An English bishop has defined a psychiatrist as "a man who goes to the Folies Bergère and looks at the audience."

SMALL MATTERS

It is a well-known fact that Americans, indeed persons in the well-developed countries the world over, are getting taller and heavier as generation succeeds generation.

Usually announcements of this progress in national physique are made with official expressions of pride, and generally convey the impression that at least some things are improving in this world.

But, alas, man may be deluding himself if some recent experience at the Rockefeller Institute in New York holds true.

The Institute has been raising mice under strictly sterile conditions, comparable to those at Notre Dame's famous germ-free laboratory. The mice are big and fat, much larger than control mice reared under normal laboratory conditions and riddled with the usual intestinal flora.

But the little runts win out in the end. The Institute has been finding that they show a markedly higher resistance to bacterial infections — even when on deficient diets — than their germ-free fellows.

AGED IN H_2O

One of the minor benefits of the atomic age, if anyone is willing to concede that there are any benefits at all, is the news that the Atomic Energy Commission has devised a method for pinpointing the age of wines and liquors based on the tritium content of the liquid. Tritium is an isotope of hydrogen.

The Internal Revenue Service is using the technique to make sure that a beverage imported as "20-year-old whisky" is indeed 20 years old.

SUCKLING TEETH

A newborn child might bite the breast that feeds him.

Some infants are born dentate, says Dr. J. H. Gardiner of Sheffield, England, reporting 12 cases of this phenomenon in which most of the infants had their lower incisors present at birth.

Dr. Gardiner says that such teeth usually are perched on a pad of soft tissue above the gum level. The most probable cause he says in the *Proceedings of the Royal Society of Medicine*, is a superficial positioning of the tooth germ, probably as a result of an anomaly in the symphysis. A family history of the condition is common.

Dr. Gardiner recommends removing the teeth and restoring the infant to its normal edentulous state to prevent ulceration of the tongue and possible injury to the mother's nipple. Eight of the cases he presented did not have their teeth extracted. Of these eight, two shed their teeth within a few days and two at about three months. In the others, the teeth grew normally.

NO WET BLANKET

A Japanese manufacturer is about to produce a diaper cover with a built-in transistorized, moistness-alert system which at the first sign of dampness sets off a buzzer alarm.

STATE OF AFFAIRS

Kevin and Thomas McIntyre are twins. But Kevin was born in Pennsylvania and Thomas in New Jersey. In fact, Kevin was born at the toll gate of a bridge and Thomas at the approach to another bridge.

Mrs. McIntyre was being taken by ambulance from her home, Cornwells Heights, Pa., to a Philadelphia hospital where her obstetrician was waiting. Because of a delay on congested highways, the driver took a short cut across a corner of New Jersey. Kevin arrived at the Pennsylvania entrance to the Burlington-Bristol bridge. Half an hour later, still en route to the hospital, Thomas was born on the New Jersey side of the Walt Whitman bridge.

Incidentally, the boys' home towns, according to their birth certificates, are Harrisburg and Trenton.

DIAL: SPACE

The vocabulary of the coming age of space has an undoubted fascination for the young, as one physician in Jefferson City, Mo., is finding out.

The city's teenagers have taken to dialing the doctor's phone number. When the receptionist answers, "This is 5-4321," they shout, "Blast off!"

W(HIS)TLE SPOTTER

All you have to do is whistle, Lauren Bacall said to Humphrey Bogart.

And all the surgeon, engaged in repairing a ventricular septal defect, has to do is listen.

If he passes a newly devised instrument, an impedance measuring probe, over the septum and it gives off a high-pitched whistle he knows he is coming too close to the bundle of His.

Names in the News

Dr. Enrique E. Ecker, emeritus professor of immunology at the Institute of Pathology, Western Reserve University Medical School, has been appointed an associate in research in the department of pathology research, Saint Luke's Hospital, Cleveland.

Dr. John W. Berg has been named editor of *Cancer*, a journal of the American Cancer Society. In addition, Dr. Berg is associate attending pathologist at Memorial Hospital, New York, and assistant professor of pathology, Cornell University Medical College. The Society also announced a $533,375 grant to **Dr. John Higginson,** professor of geographical pathology at the University of Kansas Medical Center, to continue on a lifetime basis his research in cancer.

At the annual meeting of the American Heart Association, **Dr. J. Scott Butterworth,** associate professor of medicine, New York University School of Medicine, became president for 1961-62. The president-elect is **Dr. James V. Warren,** professor and chairman of the department of medicine, Ohio State University. Receiving the Heart Association's 1961 Gold Heart Awards were: **Dr. Tinsley R. Harrison,** professor of medicine, Medical College of Alabama; **Dr. Louis N. Katz,** director, department of cardiovascular surgery, Michael Reese Hospital, Chicago; and **Frank L. Mechem,** Seattle, Wash., attorney.

At the annual session of the Pennsylvania Medical Society in Pittsburgh, **Dr. Daniel H. Bee** (below), a GP from Indiana, Pa., was installed as the 112th president of the Society. The president-elect is **Dr. Benson Harer** of Upper Darby, professor of clinical obstetrics and gynecology at the Graduate School of Medicine of the University of Pennsylvania.

Dr. Charles D. Shields, professor and chairman of the department of physical medicine and rehabilitation, Georgetown University Medical Center, has been appointed executive director of Georgetown University Hospital.

Dr. Cecil J. Watson, professor and head of the department of medicine, University of Minnesota, has received the Distinguished Service Award of the Minnesota Medical Foundation.

Dr. Amel R. Menotti, vice president and scientific director of Bristol Laboratories, has been chosen chairman-elect of the Gordon Research Conferences board of trustees. The Conferences (MWN, Oct. 13) are informal meetings of scientists, at various New Hampshire campuses.

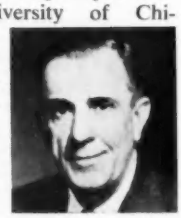
Dr. Russell Buxton of Newport News is the newly installed president of the Medical Society of Virginia. President-elect and Speaker of the House is **Dr. Fletcher J. Wright, Jr.,** of Petersburg.

Dr. Detlev W. Bronk, president of the Rockefeller Institute, has been awarded the Franklin Medal of the Franklin Institute, Philadelphia, for his "investigations of electrical and biochemical properties of nerves" and "for the perfection of his experimental techniques."

Dr. Wilson T. Sowder, State Health Officer for Florida since 1945, has been appointed by the U. S. Surgeon General to head the new Office on Aging, which will develop policies and give consultation

and guidance in the field of geriatric health.

Dr. Lowell T. Coggeshall (below), former vice president for medical and biological affairs at the University of Chicago, recently resigned as a member of the Chicago Board of Health to assume broader academic responsibilities as the new vice president of the University. **Ray E. Brown,** formerly superintendent of the University of Chicago Hospitals, has been named vice president for administration, and will retain his position as professor at Chicago's Graduate School of Business.



Dr. Kenneth E. Hamlin has been designated director of research at Abbott Laboratories, where he will be responsible for coordinating all basic research functions.

Dr. James M. Tuholski has been named president of Mead Johnson Laboratories; **Dr. Warren M. Cox, Jr.,** has been appointed vice president, nutritional research, Mead Johnson Research Center; and **Howard R. Alexander** has been appointed vice president, product development, Mead Johnson Research Center.

At the Fourth International Congress of Allergology held in New York, **Dr. C. Jimenez-Diaz** (below), of the Institute for Clinical and Medical Research, Madrid, Spain, was elected president of the International Association of Allergology. **Dr. Bram Rose,** associate professor of medicine, McGill University, Montreal, is president-elect.

Dr. Leonard A. Cohen, former associate professor in the department of physiology of the University of Pittsburgh School of Medicine, is new director of the department of physiology at the Research Laboratories of the Albert Einstein Medical Center, Philadelphia.

OBITUARIES

Dr. Martin Scheerer, 61, professor of psychology at the University of Kansas, he was authority on the psychological effects of brain damage and co-developer of a recognized test for such damage; Oct. 19, in Lawrence, Kans.

Dr. Clair L. Ingalls, 59, executive assistant of the American College of Surgeons; he died during the college's recent convention; of a heart attack; Oct. 2, in Chicago.

Dr. Thomas A. Lent, 80, tuberculosis specialist, former director of the New York State's Health Department's tuberculosis division and lecturer on tuberculosis at Trudeau Sanitarium; Oct. 19, in Washington, D. C.

Capt. Piers Grove Eliot Warburton, Royal Artillery, 65, former chairman of William R. Warner, Ltd., British subsidiary of Warner-Lambert Pharmaceutical Company and vice president of American Home Products International; Oct. 5, in London.

Dr. Frank Brewster, 89, called the "Flying Doctor" after he flew to the side of a critically wounded patient in 1919 in Kansas; later, he built Nebraska's first airport in Beaver City; of cancer; Oct. 17, in Holdredge, Neb.

Dr. Peter Graffagino, 75, professor emeritus of obstetrics and gynecology at Louisiana State University School of Medicine; well known in horse racing circles, he was president of the Louisiana chapter of the Horsemen's Benevolent Protective Association and the owner of Noureddin, the horse which ran third in the 1958 Kentucky Derby; Oct. 10, in New Orleans.

Dr. Alvah L. Sawyer, 80, formerly on the Cook County (Chicago) Bureau of Public Welfare and assistant professor of medicine at the University of Illinois College of Medicine; Oct. 4, in Chicago.

ADVERTISER INDEX

EDITORIAL

GROWING PROBLEM OF GONORRHEA

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In the United States, in 1959, gonorrhea was credited with being the third most common infectious disease, exceeded only by measles and streptococcal infections. Syphilis was fourth.

At a symposium on gonorrhea, held in Krakow, Poland, last year, evidence was offered that gonorrheal arthritis and iritis have become rare, but infection of the tubes in women still prevails as a complication in ten per cent of gonorrhea cases. Also, from two to three per cent of all cases of sterility result from gonorrheal infection. A recent statement by the World Health Organization notes that because of the short incubation period, many people are infected between the time the infected person is first exposed and the time when a positive diagnosis is made. The probability of infection is thus greater, period of immunity is short and reinfection and repeated attacks frequently occur. Evidence suggests that promiscuous sexual behavior among young people is an important factor in the spread of the disease.

Women Unaware of Infection

Gonorrhea occurs two to four times as often in men as in women, but perhaps infection is latent in many women who do not know they are infected. In some parts of the world, notably Poland, children under 12 are found to be infected with gonorrhea attacking the urethra, the cervix and the rectum. This is difficult to diagnose and resistant to penicillin and streptomycin. And often mistakes in diagnosis are made. In one clinic, 25 per cent of the men examined were found to have non-gonococcal urethritis.

The experts of the World Health Organization say that probably most of the so-called resistant cases are reinfections. However, cases exist in which penicillin has been given in too small a dosage or for too short a time or both. This condition prevails particularly when the drug is given by mouth instead of by injection. If the amount of penicillin in the blood is not maintained at an effective level, living gonococci can survive and produce relapse. For the drug to reach the localized genital pocket of infection in women, much more concentration of the antibiotic may be needed.

Both WHO and the Krakow symposium emphasize that penicillin remains the most important drug in treatment and that resistance should be met by using larger doses than the original standard of 300,000 units. The WHO report says: "A mixture of a short-acting form, to produce effective penicillinameia rapidly, with a more slowly acting compound to maintain this level, should ensure that gonococci are destroyed even after phagocytosis and so prevent relapse. A total dosage of 1.8 mega-units is recommended, given as 1.2 mega-units of procaine penicillin on the first day and 0.6 mega-units of penicillin aluminium monostearate (PAM) or benzathine penicillin on the second day. Some workers have suggested much larger doses still; the dangers of penicillin reactions remain and resuscitation facilities should be at hand. The supplementing of penicillin therapy with sulfonamides is unlikely to yield more than temporary benefit and the use of other antibiotics is probably undesirable at present."

The care of patients with venereal diseases and the prevention of spread to contacts make venereal diseases social diseases in every sense of the word. In some countries the laws require the physician to report his patient by name, and the law itself undertakes to seek out every possible contact to make sure of prompt treatment. Gonorrhea, particularly among younger people, will continue to threaten until the doctor with patients affected by venereal disease does all that he possibly can to prevent further spread.

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